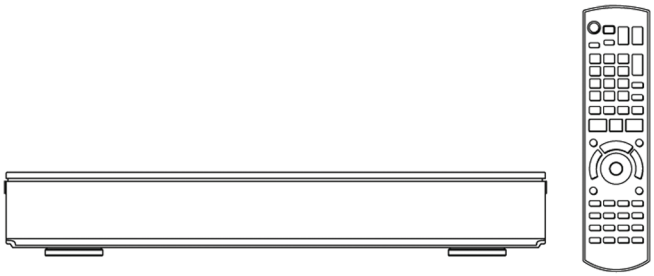
Order No. CHM1504013CE

Service Manual

Blu-ray Disc Player/ HDD Recorder

Model No. DMR-PWT550GL
DMR-PWT550GZ



Colour:

(K).....Black Type

Notes: This model's BD Drive is SXY0018

When replacing HDD, Main P.C.B. or EEPROM "HDD Error" indication is displayed and HDD must be formatted.

After that, programme in the HDD will be lost.
In detail, please refer to each content in this service manual.

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The software licenses are displayed when "Software Licence" in the Basic Settings menu is selected.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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1 Safety Precautions

1.1. General Guidelines

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1MΩ and 5.2MΩ.

   When the exposed metal does not have a return path to the chassis, the reading must be ∞ .

1.1.2. Leakage Current Hot Check (See Figure 1 .)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5kΩ, 10 watts resistor, in parallel with a 0.15μF capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and re-checked before it is returned to the customer.

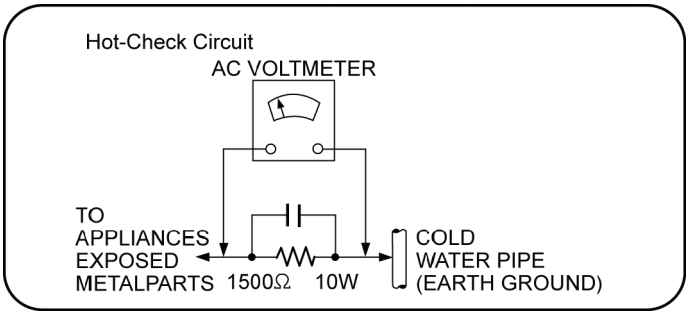


Fig. 1

2 Warning

2.1. Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor “chip” components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equiped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equiped with ES devices, place the assembly on a conductive surface such as aluminium foil, to prevent electrostatic charge build up or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder remover device. Some solder removal devices not classified as “anti-static (ESD protected)” can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminium foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   Caution:
   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety.
These parts are marked by ⚠ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

2.2. Precaution of Laser Diode

CAUTION :

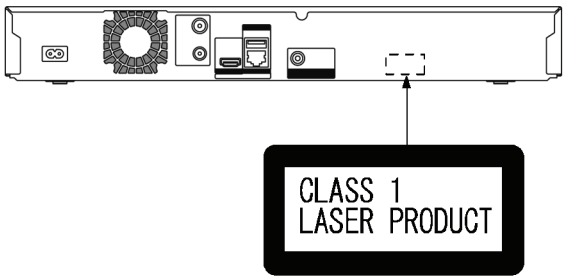
This product utilizes a laser diode with the unit turned "ON", invisible laser radiation is emitted from the pick up lens.
Wave length : 661 nm(DVDs)/783 nm(CDs)/405nm(BDs)
Maximum output radiation power from pick up : 100 μW/ VDE
Laser radiation from pickup unit lens is safety level, but be sure the followings:

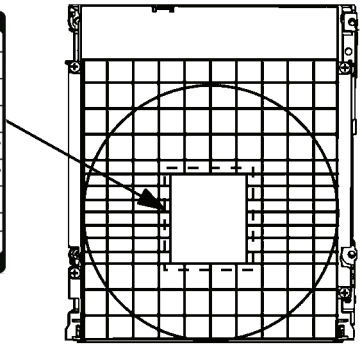
1. Do not disassemble the optical pickup unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pickup lens for a long time.

ACHTUNG :

Dieses Produkt enthält eine Laserdiode. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt.
Wellenlänge : 661 nm(DVDs)/783 nm(CDs)/405nm(BDs)
Maximale Strahlungsleistung der Lasereinheit : 100 μW/ VDE
Die Strahlungan der Lasereinheit ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.
2. Den werkseitig justierten Einstellregler der Lasereinhit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlines blicken.
4. Nicht über längere Zeit in die Fokussierlines blicken.





CAUTION!
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

2.3. Service caution based on Legal restrictions

2.3.1. General description about Lead Free Solder (PbF)

The lead free solder has been used in the mounting process of all electrical components on the printed circuit boards used for this equipment in considering the globally environmental conservation.

The normal solder is the alloy of tin (Sn) and lead (Pb). On the other hand, the lead free solder is the alloy mainly consists of tin (Sn), silver (Ag) and Copper (Cu), and the melting point of the lead free solder is higher approx.30 degrees C (86°F) more than that of the normal solder.

Definition of PCB Lead Free Solder being used

The letter of “PbF” is printed either foil side or components side on the PCB using the lead free solder. (See right figure)	PbF

Service caution for repair work using Lead Free Solder (PbF)

- The lead free solder has to be used when repairing the equipment for which the lead free solder is used. (Definition: The letter of “PbF” is printed on the PCB using the lead free solder.)
- To put lead free solder, it should be well molten and mixed with the original lead free solder.
- Remove the remaining lead free solder on the PCB cleanly for soldering of the new IC.
- Since the melting point of the lead free solder is higher than that of the normal lead solder, it takes the longer time to melt the lead free solder.
- Use the soldering iron (more than 70W) equipped with the temperature control after setting the temperature at 350±30 degrees C (662±86°F).

Recommended Lead Free Solder (Service Parts Route.)

- The following 3 types of lead free solder are available through the service parts route.
  SVKZ000001----------(0.3mm 100g Reel)
  SVKZ000002----------(0.6mm 100g Reel)
  SVKZ000003----------(1.0mm 100g Reel)

Note

* Ingredient: Tin (Sn), 96.5%, Silver (Ag) 3.0%, Copper (Cu) 0.5%, Cobalt (Co) / Germanium (Ge) 0.1 to 0.3%

3 Service Navigation

3.1. External HDD (USB HDD)

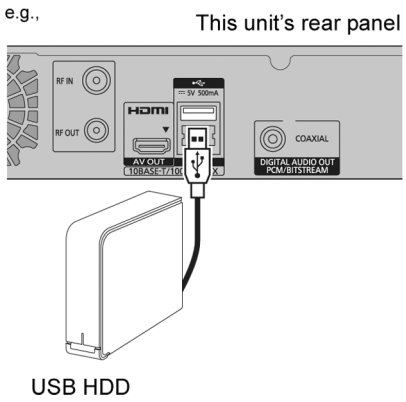
Please use a confirmed USB HDD

For the latest information on confirmed USB HDDs, please check the following website.
http://panasonic.jp/support/global/cs/

- Certain non-confirmed USB HDDs cannot be used with this unit.
- If a problem occurs with the USB HDD, please contact the manufacturer of the device.

3.1.1. Connecting the USB HDD

Connect this unit with optional USB HDD.



- Only one USB HDD can be connected at the same time.
- Do not connect additional HDDs using a USB hub.
- For details about connection method, refer to the instructions supplied with the USB HDD.

3.1.2. Disconnecting the USB HDD

Please use the following procedure to disconnect.
Disconnecting without following this procedure may result in the loss of recorded content from the USB HDD or the internal HDD.

1. Press [FUNCTION MENU].
2. Select "Basic Settings" in "Setup", then press [OK].
3. Select "Settings for USB HDD" in "HDD/ Disc/ USB HDD", then press [OK].
4. Select "USB HDD Disconnection", then press [OK].
5. Select "Yes", then press [OK].
6. Disconnect the USB HDD from this unit.

3.1.3. Registering the USB HDD

3.1.3.1. Registering the USB HDD

- If you intend to move recorded titles to a USB HDD, the USB HDD must be registered to this unit first.
  Limitation information:
  - A USB HDD with a capacity of less than 160 GB cannot be used.
  - Registering of a USB HDD will format the USB HDD and all the content already recorded will be deleted.
  - Up to eight USB HDDs can be registered on this unit.
  - Registered USB HDDs cannot be used with devices other than this unit.
- If the registering screen appears when connecting the USB HDD, go to step 5.

1. Press [FUNCTION MENU].
2. Select "Basic Settings" in "Setup", then press [OK].
3. Select "Settings for USB HDD" in "HDD/ Disc/ USB HDD", then press [OK].
4. Select "USB HDD Registration", then press [OK].
5. Select "Yes", then press [OK].
   - If you have already registered eight USB HDDs, it will be necessary to delete one or more of them before registering a new USB HDD.

   The message screen appears:
   a. Select "Yes", then press [OK].

b. Select the USB HDD to cancel, then press [OK]. The confirmation screen appears.
c. Select "Yes", then press [OK].

6. When the registering is complete, message screen appears.
   Press [OK].
7. The confirmation screen appears.
   Press [OK].

3.1.3.2. Settings for USB HDD

Delete all titles

Delete all titles on the USB HDD.

- Delete does not work if one or more titles are protected.

1. Press [FUNCTION MENU].
2. Select "Basic Settings" in "Setup", then press [OK].
3. Select "Settings for USB HDD" in "HDD/ Disc/ USB HDD", then press [OK].
4. Select "USB HDD Management", then press and hold [OK] for 3 seconds.
5. Select "Delete all titles", then press [OK].
6. Select "Yes" and press [OK].
7. Select "Start" and press [OK].
8. The confirmation screen appears, then press [OK].

Format USB HDD

Formatting deletes all contents, and they cannot be restored.

- Check carefully before proceeding.

1. Press [FUNCTION MENU].
2. Select "Basic Settings" in "Setup", then press [OK].
3. Select "Settings for USB HDD" in "HDD/ Disc/ USB HDD", then press [OK].
4. Select "USB HDD Management", then press and hold [OK] for 3 seconds.
5. Select "Format USB HDD", then press [OK].
6. Select "Yes" and press [OK].
7. Select "Start" and press [OK]. Then formatting starts.
8. Press [OK] after formatting completed.

3.1.3.3. To cancel all USB HDD registrations

- If you register a USB HDD, all the content already recorded on the USB HDD will be deleted.
- It is not possible to play back the content on the USB HDD whose registration has been cancelled.
- You can check the registration number of the USB HDD on the DIRECT NAVIGATOR.

Cancellation of all USB HDD Registrations

This function cancells the registrations of all the USB HDDs registered on this unit.
Only do this if you are going to dispose of this unit.

- Before operation, perform "3.1.2. Disconnecting the USB HDD" and remove the USB HDD.
- It is not possible to play back the content from a USB HDD whose registration has been cancelled.

1. Press [FUNCTION MENU].
2. Select "Basic Settings" in "Setup", then press [OK].
3. Select "Settings for USB HDD" in "HDD/ Disc/ USB HDD", then press [OK].
4. Select "Cancellation of all USB HDD Registrations", then press and hold [OK] for 3 seconds.
5. Select "Yes", then press [OK].
6. The confirmation screen appears.
   Select "Yes", and press [OK].
7. When the cancellation is complete, message screen appears.
   Press [OK].

3.1.3.4. Registration procedure for USB HDD for inspection

This function registers a USB HDD for inspection aside from 8 USB HDDs that can be registered in Normal mode.
If the USB HDD for inspection is registered in User mode, it cannot be erased. Make sure to use Special mode to register the USB HDD for inspection.

Registration procedure

1. Perform "3.4.3. Nondisclosure mode 2" to enter the Service mode.
2. Press the [7][4] buttons of remote control in the Service mode to enter the Special mode.
3. If the new USB HDD is connected, it is automatically formatted/registered. (There is no TV monitor display for registration.)
   The USB HDD registered in the Special mode can be operated using the same functions (format, record/play/edit, dubbing) as those for USB HDDs registered in the Normal mode.
   The Special mode can be cancelled at power "OFF" only. (Cancelling the Special mode will erase the registration in the Special mode.)

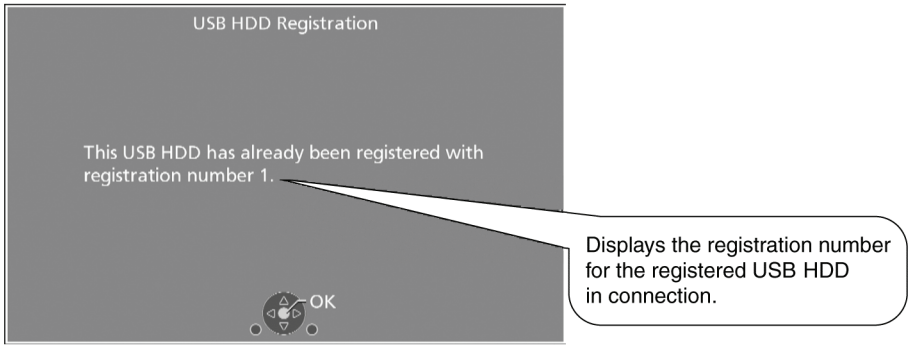
3.1.4. Operation check when USB HDD is connected

Check the operation status (normal or abnormal) of the USB connection part as follows.

1. Press [FUNCTION MENU].
2. Select "Basic Settings" in "Setup", then press [OK].
3. Select "Settings for USB HDD" in "HDD/ Disc/ USB HDD", then press [OK].
4. Select "USB HDD Registration", then press [OK].

Normal operation:

The registered USB HDD is automatically displayed when connected.
(*Displayed items differ depending on the connected USB HDD.)



Abnormal operation (1):

When the USB HDD cannot be detected, "Cannot detect USB HDD." etc. will be automatically displayed.
(*When the cable (USB cable) between the main unit and the USB HDD is poorly connected (cable disconnection), etc.)

Abnormal operation (2):

When a wrong USB HDD incompatible with this unit is connected, "Connected USB device cannot be used with this unit.", etc. will be automatically displayed.
(*Incompatible USB HDD: When devices with capacity of less than 160GB or more than 2TB or other USB devices are connected)

Abnormal operation (3):

When more than 1 USB HDD are connected at the same time, "Registration of USB HDD must be done with only one USB storage device connected.", etc. will be automatically displayed.

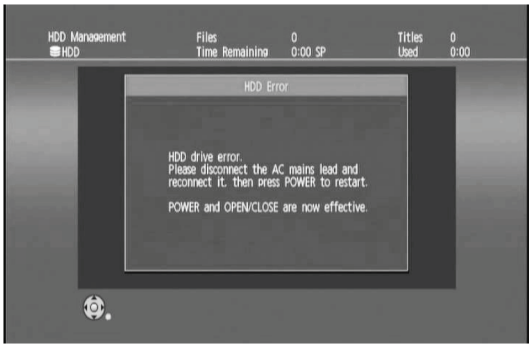
Abnormal operation (4):

When a USB HDD compatible only with USB 1.1 or below is connected, "Connected USB device cannot be used with this unit.", etc. will be automatically displayed.

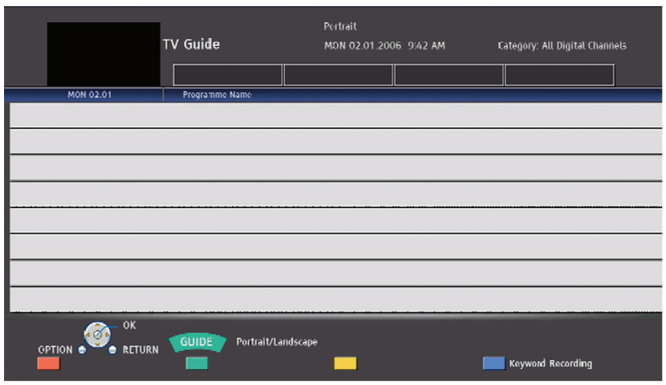
3.2. How to format for HDD when replacement of HDD or Main P.C.B.

3.2.1. How to escape “HDD Error” indication on GUI display.

1. When exchange HDD or Main P.C.B., the " HDD Error " screen is displayed, but, according to a following procedure, please format HDD.



2. Turn off the power button first, then turn on the power with the " GUIDE " button on remote-controller. (Shown in Reference screen 1)



Reference screen 1

3. Turn on the “RETURN” button next, move to the normal display.

3.2.2. Procedure of the “HDD format”.

1. Press [FUNCTION MENU].
2. Select " Setup " and press [OK].
3. Select " Basic Settings " and press [OK].
4. Select "HDD / Disc / USB HDD" and press [OK].
5. Select " HDD Management " and press [OK] for 3 seconds.
6. Select " Format HDD " and press [OK].
7. Select " Yes " and press [OK].
8. Select " Start " and press [OK]. Then formatting starts.
9. Press [OK] after formatting completed.
10. Press [RETURN] to exit setting mode.

3.3. Combination of Multiple Pressing on the Remote Control

Press multi-buttons (in combination) on the remote control simultaneously for operations, such as initialization or service mode, etc.
There are no multiple pressing functions on the previous remote controls, thus, please be sure to use the supplied remote control.

3.4. Entering Special Modes with Combination of Multiple Pressing on the Remote Control

Enter the following special modes by multiple pressing functions on the supplied remote control.
After entering each mode, switch to the desired menus for operation.

Disclosure mode	Nondisclosure mode 1	Nondisclosure mode 2
[OK] [Blue] [Yellow]	[6] [7] [Yellow]	[5] [9] [Red]
		

◆ **Menu switch:** ⬇ mark.
[▶] (remote control),
or
[Power] (main unit)

◆ **Operating menu:**
[OK] (remote control)
or
[O/C] (main unit)

※ Release from special modes automatically after the operation.

◆ **Release from special modes:**

- Press other buttons in no connection with the above operations.
- No operation for over 2 min.
- Press and hold [Power] on main unit (forced to turn off).

3.4.1. Disclosure mode (Combination of multiple pressing: [OK] [Blue] [Yellow])

Press and hold [OK] [Blue] [Yellow] on the remote control simultaneously for 5 sec., then "00 RET" is displayed on FL display window.

Power	Disc	FL display	Key operation	Function	Remarks
OFF	Yes/No	00 RET	No	No	
		⬇ 06 FT0	OK	Force tray open	When [O/C] button is invalid, the tray of BD Drive is forced to open. If the tray still cannot be opened in this mode, please refer to "6.1.2 When the Forcible Disc Eject can not be done ".
ON	Yes/No	00 RET	No	No	
	No	⬇ 03 VL	OK	Release from BD/DVD video play restriction	Release from the aging restriction on BD video and DVD video play.
	Yes/No	⬇ 04 PRG	OK (Press and hold)	Progressive initialization	Initialize the progressive settings, and switch to the interlaced display. Press and hold [STOP] (not [OK])(on the remote control or main unit) to switch to "10 OCL" (setting shop lock mode)
	Yes/No	⬇ 05 P/N	OK (Press and hold)	Switch the TV System	It returns to the default side (PAL). The change of PAL and NTSC can be performed in the following procedure. The unit's TV System is different from that of the disc. While stopped, keep pressing [STOP] and [OPEN/CLOSE] on the main unit for 5 or more seconds. The system switches from PAL to NTSC or vice versa.
	Yes/No	⬇ 07 DC	OK (Press and hold)	Deep Color initialization	Initialize Deep Color.
	Yes	10 OCL	OK	Shop lock mode setting/release ([O/C] is invalid/valid, while setting/release this mode.)	When "04 PRG" is displayed, press and hold [STOP] (on the remote control or main unit) to switch to other displays. Press [OK] to only lock the tray switch. *Even turn ON/OFF the power, it is still in locking.

3.4.2. Nondisclosure mode 1 (Combination of multiple pressing: [6] [7] [Yellow])

Press and hold [6] [7] [Yellow] on the remote control simultaneously for 5 sec., then “50 RET” is displayed on FL display window.

Power	Disc	FL display	Key operation	Function	Remarks
ON	Yes/No	50 RET	No	No	
		⬇ 51 NOP	OK	No	When "51 NOP" is displayed, press and hold [STOP] (on the remote control or main unit) to switch to "52 BRE" (delete BD-ROM history settings)
		52 BRE	OK	BD-ROM history delete	When "51 NOP" is displayed, press and hold [STOP] (on the remote control or main unit) to switch to other displays. Press [OK} to delete BD-ROM history settings).

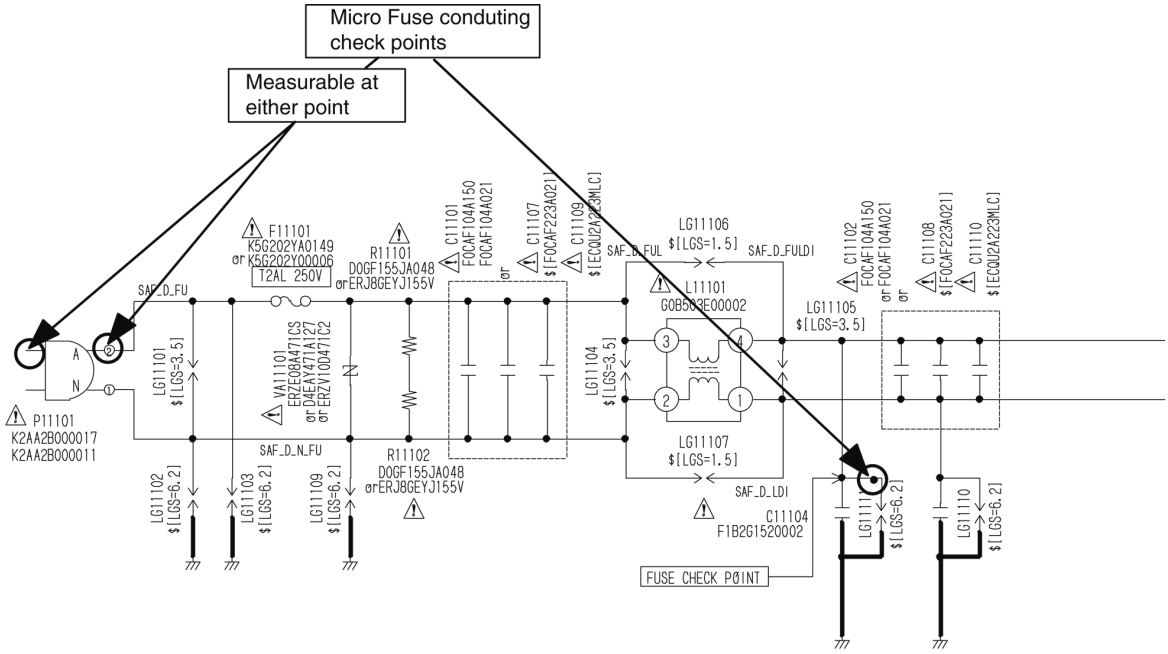
3.4.3. Nondisclosure mode 2 (Combination of multiple pressing: [5] [9] [Red])

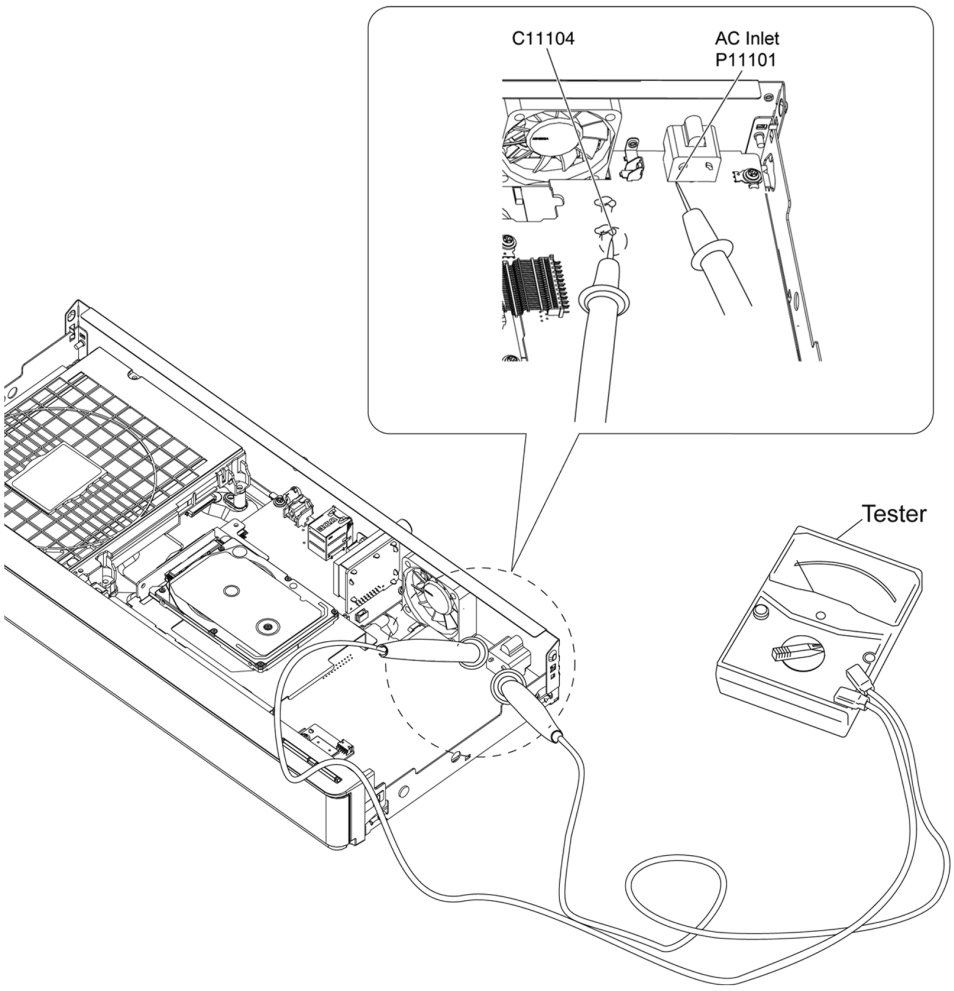
Press and hold [5] [9] [Red] on the remote control simultaneously for about 5 sec., then "70 RET" is displayed on FL display window.

Power	Disc	FL display	Key operation	Function	Remarks
OFF	Yes/No	70 RET	No	No	
		⬇ 80 SRV	OK	Switch to service mode	Press [OK], then "HELLO" is displayed, and wait about 30 sec. until "SERV" is displayed.
		⬇ 83 SDI	OK	CD/SD Diag	Do not apply in normal service.
		⬇ 91 SPD	OK	Special display	Do not apply in normal service.
		⬇ 92 F99	OK	F99 Validate/Invalidate switch	Do not apply in normal service.
ON	Yes/No	70 RET	No	No	
		⬇ 81 AIG	OK	Switch to aging mode	
		⬇ 82 TSR	OK	Switch to tuner service mode	
		⬇ 83 SDI	OK	CD/SD Diag	Do not apply in normal service.
		⬇ 91 SPD	OK	Special display	Do not apply in normal service.
		⬇ 92 F99	OK	F99 Validate/Invalidate switch	Do not apply in normal service.
		⬇ 93 FIN	OK (Press and hold)	CS reset	Press [OK], then "FACT" is displayed, and the power will turn off automatic.
		⬇ 96 DIC	OK	Diagnosis Code display	Press [OK], then "Diagnosis in progress. Please Wait." is dispalyed, and the Diagnosis Code will be displayed.

3.5. Micro Fuse conducting check

This unit uses the Micro Fuse.
Check the Micro Fuse conducting using the Tester at the check points below.





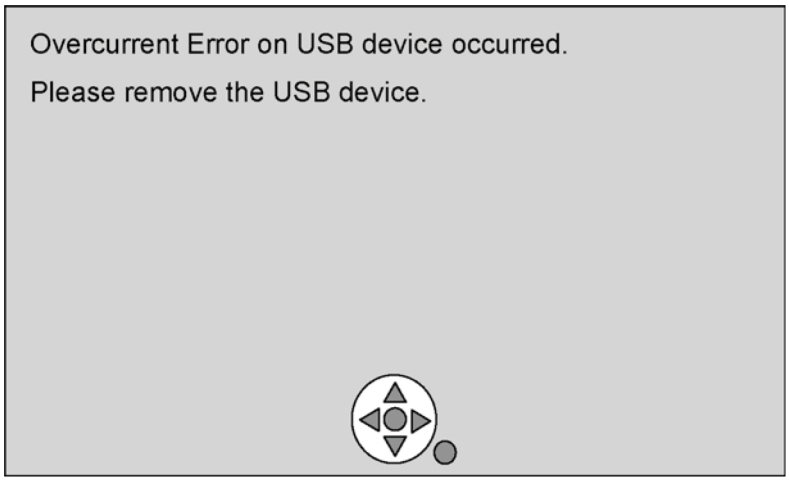
3.6. Operation check when a USB device is connected

You can check the operation status (normal or abnormal) of the USB connection part of this unit easily as shown below.
Connect each device to the USB terminal on the front panel and check the operation status on the TV monitor.

Normal operation:

Automatically displayed when the USB connection is made to a digital camera, etc.
(Example below: When JPEG materials have been recorded)
(*Displayed items differ depending on the recorded contents.)

Abnormal operation (Example 1):
Warning is displayed automatically if overcurrent is detected when a USB device is connected.
(*When a USB device or this unitís USB terminal shorts out or the power supply type of USB device is connected)



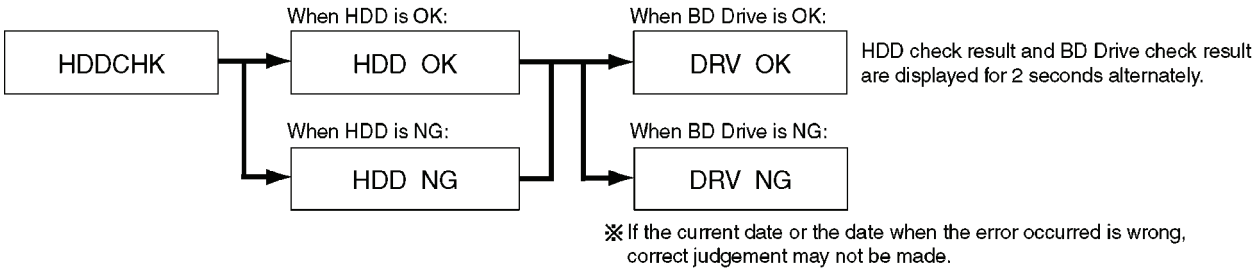
Abnormal operation (Example 2):
When the terminal of USB device is damaged or open, there is no display on the TV monitor.

3.7. (HDD/BD Drive) Service Navigation

3.7.1. HDD/BD Drive Malfunction check (Simplified Method)

Perform simple quality judgement process of HDD/BD Drive according to the following operations.

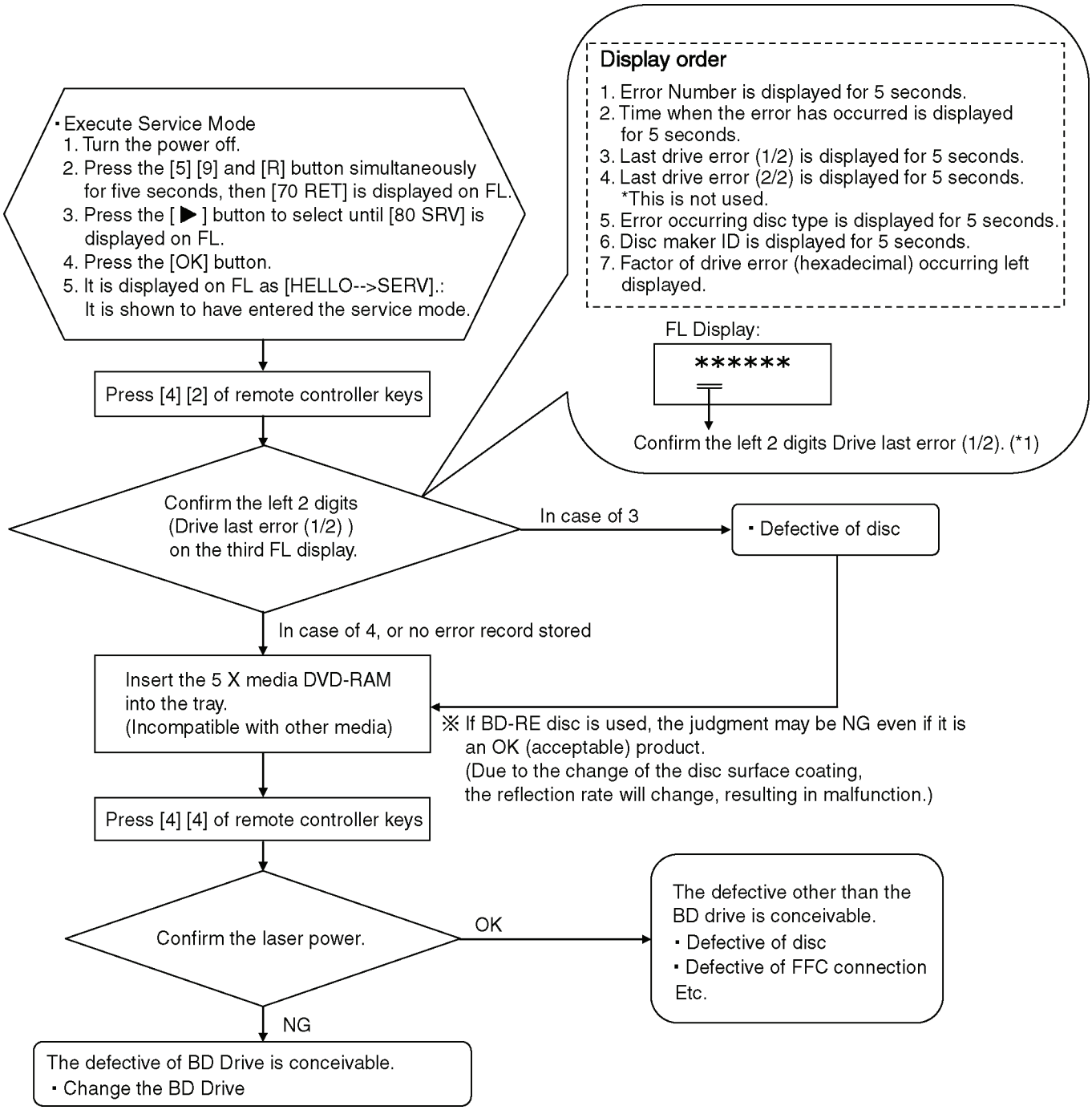
1. Execute Service Mode
   a. Turn the power off.
   b. Press the [5] [9] and [R] button simultaneously for five seconds, then [70 RET] is displayed on FL.
   c. Press the [▶] button to select until [80 SRV] is displayed on FL.
   d. Press the [OK] button.
   e. It is displayed on FL as [HELLO → SERV]:It is shown to have entered the service mode.
2. Press [3] [8] of remote controller keys in service mode.
3. Judge the quality on FL display.



※ If the current date or the date when the error occurred is wrong, correct judgement may not be made.

3.7.2. BD Drive Operation check flow

Perform quality judgement process of BD Drive according to the following operation.



*1: The drive supports the following error sense keys:

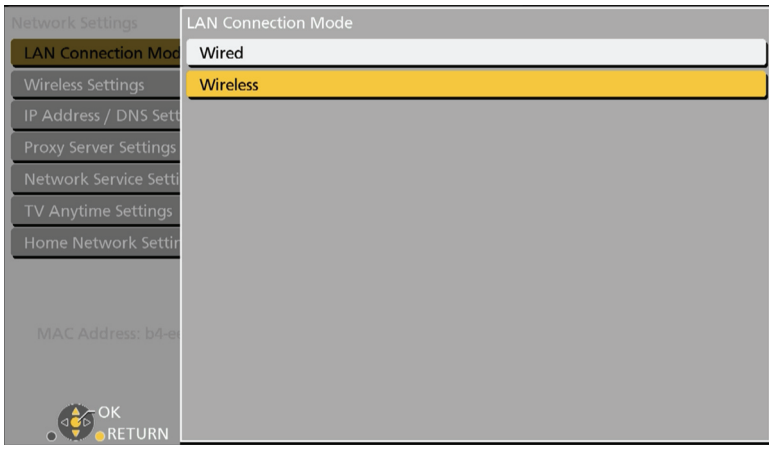
Contents	Sense key	Description
NO SENSE	00	Successful completion.
RECOVERED ERROR	01	Successful completion through recovery.
NOT READY	02	The drive is unable to access the disc.
MEDIUM ERROR	03	An error caused by medium error has occurred.
HARDWARE ERROR	04	An error caused by the drive hardware has occurred.
ILLEGAL REQUEST	05	The CDB or parameter is illegal.
UNIT ATTENTION	06	The drive is alerting the host to some event.
DATA PROTECTED	07	The disc is read-protected or write-protected.
ABORTED COMMAND	0B	The drive has aborted an I/O process or command execution due to a reason not relevant to any other sense key, for example, a protocol violation on the interface.

3.8. Wi-Fi Module (Internal) Malfunction Check (Simplified Method)

3.8.1. Procedure of the Module (Internal) Malfunction Check

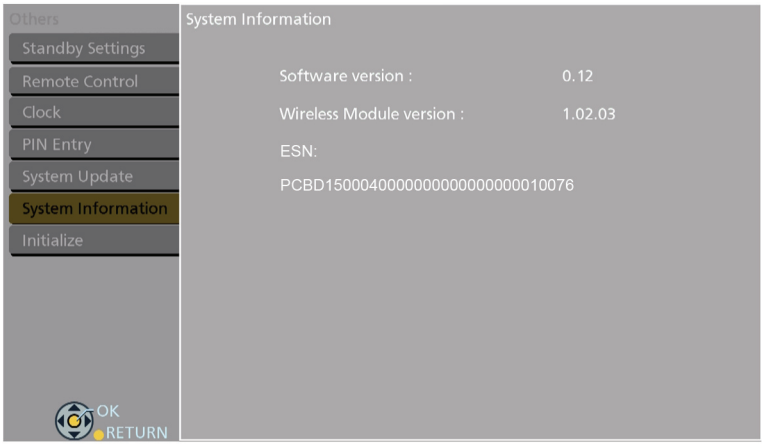
3.8.1.1. Method of Wireless LAN Setting

1. Press [FUNCTION MENU].
2. Select "Basic Settings" in "Setup", then press [OK].
3. Select "Network Settings" in "Network", then press [OK].
4. Select "Wireless" in "LAN Connection Mode".
5. Press [OK]. The following "Wireless Setting screen (example)" is displayed.



3.8.1.2. Method of displaying Wireless LAN Module Version

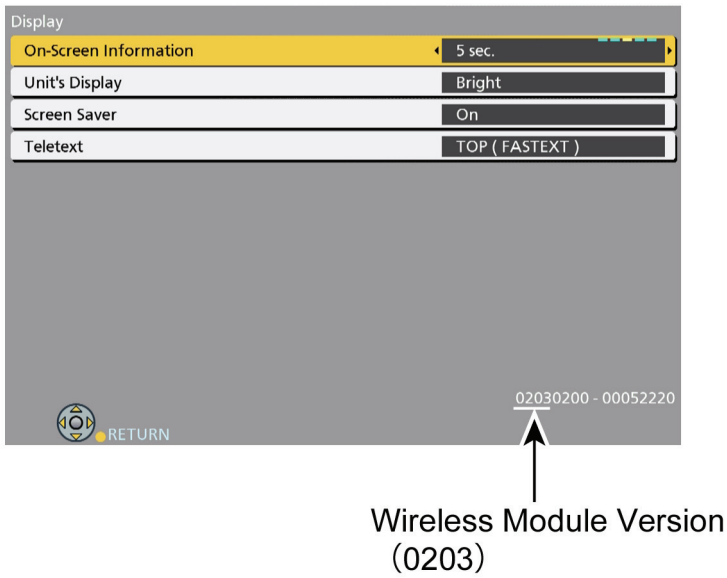
1. Press [FUNCTION MENU].
2. Select "Basic Settings" in "Setup", then press [OK].
3. Select "System Information" in "Others".
4. Press [OK]. The following "System Information screen (example)" is displayed.



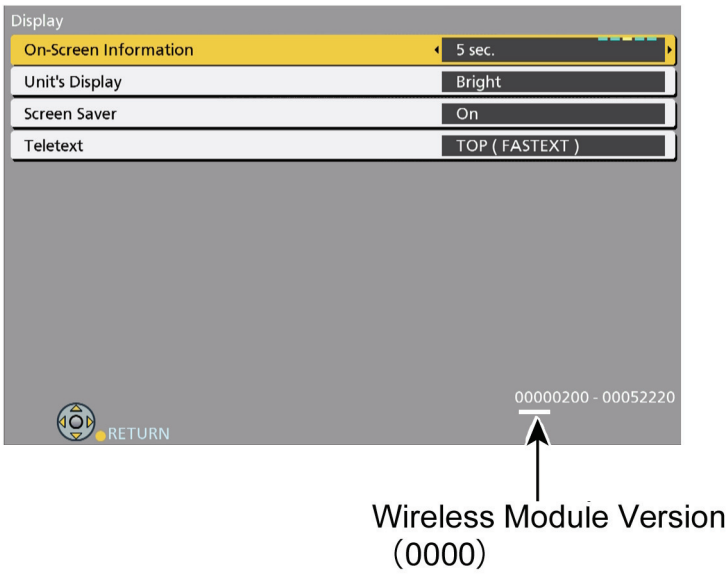
3.8.1.3. Confirm method of Wireless LAN Module invalidity/effective

1. Press [FUNCTION MENU].
2. Select "Basic Settings" in "Setup", then press [OK].
3. Select "Display" and press [OK].
4. Press [STATUS], over than 5 seconds. The following "Display screen (example)" is displayed.

   In case of Wireless LAN Module effective.



   In case of Wireless LAN Module invalid.



5. In case of Wireless LAN Module effective, Wireless LAN Module or Wirless LAN Module connection cable may be the source of problem.
6. Please finally check the operation of the fact.

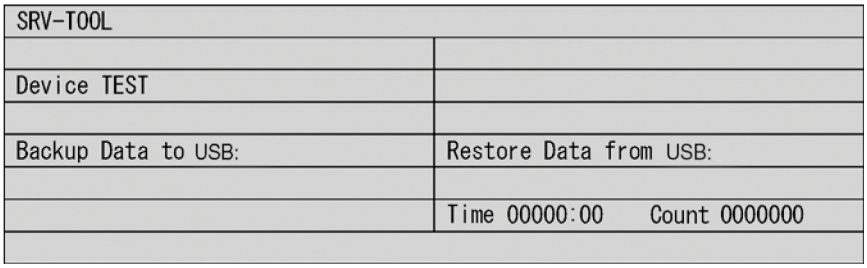
3.9. Check with Tuner Service Mode

Inspect the inside components using the application for inspections by service personnel.

Main functions

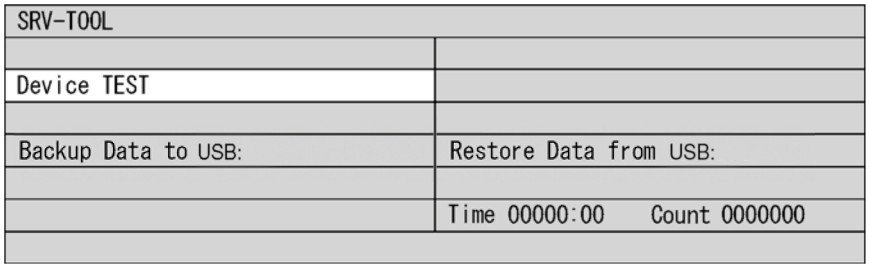
N0	Function Name	Contents
01	Hard Test	Perform Access Test for each hard device and display the result.
02	User Setting Information Backup	Backup/ Restore User Setting Item (The Initial Setting) to the USB.
03	Time xxxxxxx Count yyyyyyy	Length of Power ON time/ Count of power ON time

1. Execute Tuner Service Mode
   a. Turn the power on to receive digital broadcasting (HD broadcasting).
   b. Press the [5] [9] and [R] button simultaneously for five seconds, then [70 RET] is displayed on FL.
   c. Press the [▶] button to select until [82 TSR] is displayed on FL.
   d. Press the [OK] button.
   e. It is shown to have entered the tuner service mode.
   f. The command is transmitted by attached remote control.
2. Finishing Service Mode
   Method 1: After turning the unit “OFF”, pull out the AC cord.
   Method 2: Repeat turning ON and OFF twice: P-OFF → P-ON → P-OFF → P-ON.



3.9.1. Hard Test (Device Test)

Perform Access Test for each hard device and display the result.



```
+--------------------------+
| -- Hard Test Result --   |
+--------------------------+
| <1> EEPROM [READ]  (Result)|
+--------------------------+
| <2> EEPROM [WRITE] (Result)|
+--------------------------+
| <3> TUNER 1        (Result)|
+--------------------------+
| <4> TUNER 2        (Result)|
+--------------------------+
| <5> LAN            (Result)|
+--------------------------+
| <6> -----                  |
+--------------------------+
| <7> -----                  |
+--------------------------+
| <8> -----                  |
+--------------------------+
| <9> -----                  |
+--------------------------+
```

<Function>

<1> : EEPROM [READ] : Read Test (Main P.C.B. : IC6811)
<2> : EEPROM [WRITE] : Write Test (Main P.C.B. : IC6811)
<3> : TUNER 1(DVB-T Tuner):I2C_Bus Check (Tuner P.C.B.(VEP77183A))
<4> : TUNER 2(DVB-T Tuner):I2C_Bus Check (Tuner P.C.B.(VEP77183A))
<5> : LAN:Register Access Test (Digital P.C.B.: IC59001)
<6> : (None)
<7> : (None)
<8> : (None)
<9> : (None)

<Display>

<1> : EEPROM [READ] ＯＫ : Normality
ＮＧ : EEPROM Read Error
<2> : EEPROM [WRITE] ＯＫ : Normality
ＮＧ : EEPROM Write Error
<3> : TUNER 1 ＯＫ : Normality
ＮＧ : TUNER (DVB-T Tuner) I2C_Bus. Error
<4> : TUNER 2 ＯＫ : Normality
ＮＧ : TUNER (DVB-T Tuner) I2C_Bus. Error
<5> : LAN ＯＫ : Normality
ＮＧ : LAN Register Access Error

Note:

Hard test result does not guarantee that problems do not exist even if the result is OK.
The result is used as reference when any trouble occurs.

3.9.2. Use times and number of times of Power ON/OFF

Display accumulated time of Power ON and display number of times of Power ON/OFF.

SRV-TOOL	
Device TEST	
Backup Data to USB:	Restore Data from USB:
	Time 00000:00(*1)Count 0000000(*2)

*1 : Display accumulated time of Power ON
Display on a 15-minute basis. Example: 00123:15 → 123 hour 15 minute
*2 : Display number of times of Power ON/OFF
Example: 0000123 →123

3.9.3. User Setting Information Backup

Purpose

After the recorder is repaired, the restored setting information is not default, but the information before repaired.

Operation summary

Before starting repair, import data on memory of the unit to export the data to USB on Tuner Service Mode display.
After the repair is finished, import the data on USB to export the data to the memory on the unit by operating on Tuner Service. Mode display again.

- **Data to be backed up**
- Each setting item that a user can set at “SET UP” (*1) (START → FUNCTION →Setup →Basic Settings →Others.)
  The following data cannot be backed up.
  - Program chart data
  - Dedicated areas for Internet site service providers (unique information for each company), broadcast mail, two-way communication list, board, or favorite page
  - Status saving systems (last channel except for VHF, UHF, drive selection status, etc.)

Note:

Of user setting information, only items selected and set on the initial Setup display can be backed up and restored.

*1: Of user setting information, except items selected and set on the initial Setup display.

Operation procedure

Preparation:
Prepare a USB to export data stored in this unit.
Create the following directory on the USB.
¥ EEPBAKUP

Boot:

1. On Tuner Service Mode display
2. There are many port models of USB, you need to make sure other USB ports don't connect USB memory and USB-HDD.
3. Insert USB memory for writing.
4. Using Remote Controller, move the cursor to useris setting information backup display position (Refer to below) on Tuner Service Mode display.
5. Press [OK].
   After “Try → OK” is displayed, the data is exported to USB.
   (Refer to below)

SRV-TOOL	
Device TEST	
Backup Data to USB : OK	Restore Data from USB:
	Time 00000:00 Count 0000000

When OK(***) is displayed, the data is successfully exported.

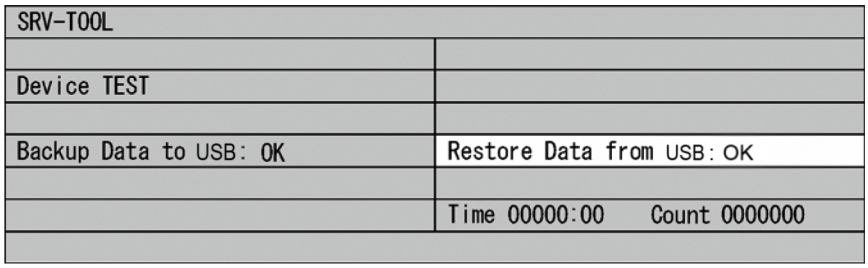
Note:

If the backup file already exists in the USB, the data is overwritten and “OK” is displayed.

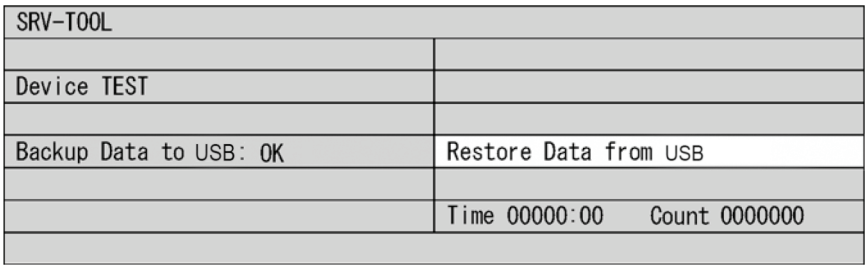
6. Remove the USB from the unit.
7. Turn the unit OFF to finish Tuner Service Mode.

Restoring the back up data to the unit

1. Turn the unit ON.
   Perform the following: Function MENU - Setup-Basic Settings - Others - Initialize - Shipping Condition.
2. Start Tuner Service Mode.
3. There are many port models of USB, you need to make sure other USB ports don't connect USB memory and USB-HDD.
4. Insert the USB in save data to the unit.
5. Using Remote Controller, move the cursor to userís setting information backup display position (Refer to below) on Tuner Service Mode display.



6. Press [OK].
   After "Try → OK" is displayed, the data is restored to USB.
   (Refer to below)



   When OK(***) is displayed, the data is successfully exported.
7. Remove the USB from the unit.
8. Turn the unit OFF to finish Tuner Service Mode.

3.10. Description of the Self Diagnosis <Operation Method, Details>

3.10.1. How to check the diagnosis code

This device can display the device information with a 16 digit number on the screen (Diagnosis code) in order for us to promptly check the customer's device installation status when the customer contacts our customer service center.

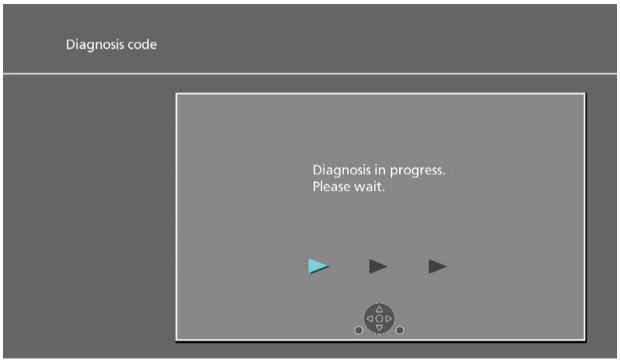
3.10.1.1. Procedure of the diagnosis code check

Prerequisites:

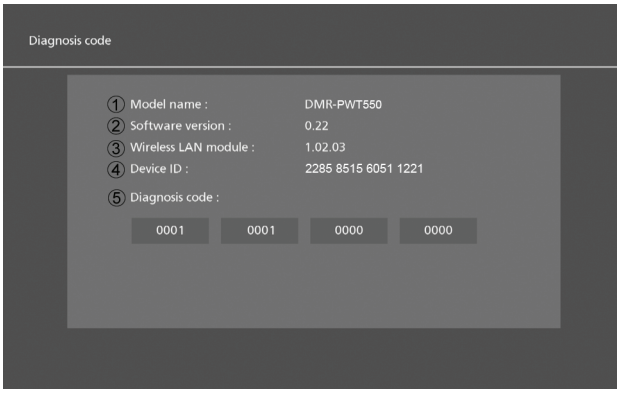
1. The power is ON.
2. EE viewing screen (not recording or acting as a server).

Procedure:

1. Press and hold [5], [9] and [Red] button on the remote control simultaneously for 5 sec. to switch to "Nondisclosure mode 2".
2. Switch the menu with either the [POWER] button on the main unit or the [Right cursor] on the remote control to display "Diagnosis Code" (FL display 96 DIC).
3. Start the menu by either pressing the [OPEN/CLOSE] button on the main unit or the [OK] button on the remote control.



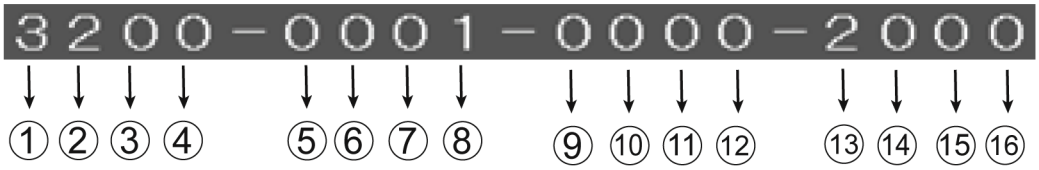
4. Press the OK button. The following "Diagnosis Code Screen (Example)" will be displayed.



Item		Details
①	Model Name :	Display the model name.
②	Software version :	Display the software version.
③	Wireless LAN module :	Display the wireless LAN module version. (Wireless LAN incorporated model)
	Wireless LAN adapter :	Display the wireless LAN module version. (Wireless LAN external model)
	(No display)	Unsupported Wireless LAN model does not display.
④	Device ID :	Display the device ID.
⑤	Diagnosis code :	Display the diagnosis code.

3.10.1.2. Description of the diagnosis code screen

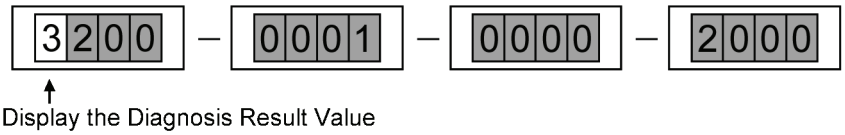
Each of the diagnosis code details:



Digit	Diagnosis details	Digit	Diagnosis details
①	Drive system	⑨	HDMI terminal 2
②	HDD system	⑩	(Reserved)
③	(Reserved)	⑪	(Reserved)
④	USB-HDD diagnosis	⑫	(Reserved)
⑤	μ code/HDMI system	⑬	Abnormity History of Drive/HDD/FAN
⑥	TUNER system	⑭	(Reserved)
⑦	(Reserved)	⑮	(Reserved)
⑧	EEPROM/Ether	⑯	(Reserved)

[Specifications of Detailed Diagnostic Code]

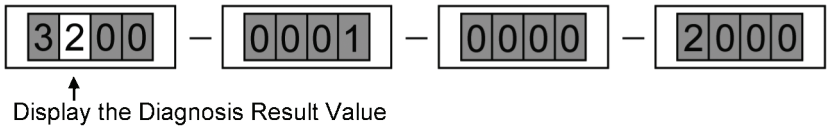
1. Diagnosis of DVD Drive



<Diagnosis Result Value>

0	There is no history of failure/ abnormality detected on the Drive. Please check other diagnosis items.
1	Unable to communicate with the Drive. Check to see if there is any problem with the connection between S-ATA cable or Drive power 6P cable and the voltage power supply. If there is no problem with the supply voltage or connection, there is a high possibility of Drive unit defect.
2	There is an error that can be determined as a failure in the Drive.
3	There is an error that is caused by disk error or disk operation. If this error occurs only in specific disk that you are using, check to see if the same malfunction occurs by changing the media to a disk of different manufacturer or different type. Check by unplugging and plugging back the FFC wire or S-ATA cable of Drive connection. Replace the wire for improvement. If the turntable is dirty, malfunction may originate from slipping phenomenon, etc. Please perform cleaning. If the disk cannot be read/written properly after cleaning, replacing the Drive may be necessary.
8	Unable to execute the Diagnosis Code Function normally. There is a possibility of malfunction in the digital P.C.B. side.
9	There is an error that can be determined as unsupported Drive. Replacing the Drive unit is necessary.
Other	The Input Code is not correct. Please check the Diagnosis Code again.

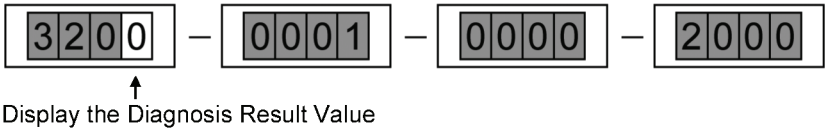
2. HDD Diagnosis



<Diagnosis Result Value>

0	No abnormality was detected from HDD inspection. Please check other diagnosis items.
1	Unable to communicate with the HDD. Check to see if there is any problem with the connection between each HDD connector and the voltage power supply. If there is no problem with the supply voltage or connection, there is a high possibility of HDD unit defect.
2	An abnormality that can be determined as HDD failure was detected. Replace the HDD unit.
8	Unable to execute the Diagnosis Code Function normally. There is a possibility of malfunction in the digital P.C.B. side.
Other	The Input Code is not correct. Please check the Diagnosis Code again.

3. USB-HDD Diagnosis

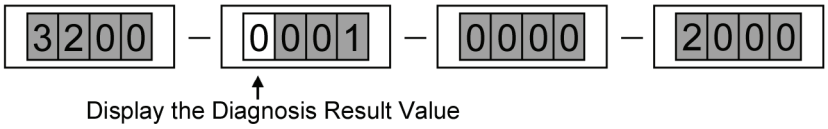


<Diagnosis Result Value>

0	No abnormality was detected from USB-HDD inspection. Please check other diagnosis items.
1	No USB-HDD is connected or some other device is connected. Check to see if there is any problem with the USB cable connection or the voltage power supply. If there is no problem with the supply voltage or connection, there is a high possibility of USB-HDD unit defect.
2	An abnormality that can be determined as USB-HDD failure was detected. Replace the USB-HDD unit.
6	If multiple USB-HDD units are connected.
7	If an unsupported USB-HDD is connected.
8	Unable to execute the Diagnosis Code Function normally. There is a possibility of malfunction in the digital P.C.B. side.

4. Digital/Tuner/Main P.C.B. System Diagnosis

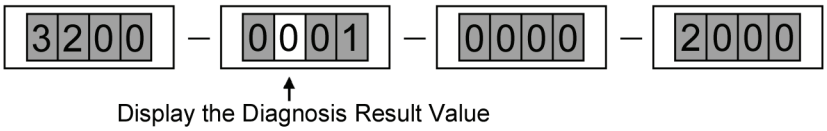
(1) IC communication in the digital P.C.B. (CPU and Flash/DDR/HDMI, etc.)



<Diagnosis Result Value>

0	No abnormality was detected in the digital P.C.B..
1	If there is a communication failure between CPU and FLASH/DDR, there is a high possibility of digital P.C.B. circuit (such as foil cutting) or parts failure.
2	If there is a communication failure between CPU and HDMI-LSI, there is a high possibility of digital P.C.B. circuit (such as foil cutting) or parts failure.
3	There is a communication failure between CPU and FLASH/DDR, and between CPU and HDMI-LSI. Take measures for "1" and "2".
4	There is an abnormality in HDMI-CEC circuit operation (High/Low Output). There is a high possibility of digital P.C.B. circuit failure (such as foil cutting) or parts failure.
5	There is a communication failure between CPU and FLASH/DDR, abnormality in HDMI-CEC circuit operation (High/Low Output). Take measures for "1" and "4".
6	There is a communication failure between CPU and HDMI-LSI, abnormality in HDMI-CEC circuit operation (High/Low Output). Take measures for "2" and "4".
7	There is a communication failure between CPU and FLASH/DDR and between CPU and HDMI-LSI, abnormality in HDMI-CEC circuit operation (High/Low Output). Take measures for "3" and "4".
Other	The Input Code is not correct. Please check the Diagnosis Code again.

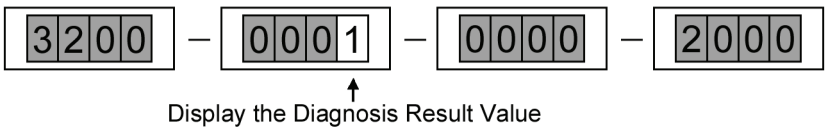
(2) IC Communication of TUNER System



<Diagnosis Result Value>

0	No abnormality was detected in communication between the Digital Tuner and IC.
1	A communication abnormality occurred between the Digital Tuner (OFDM/Digital Modulation IC) and IC. There is a high possibility of Digital Tuner (OFDM/Digital Modulation IC) defect, or a communication failure between ICs.
2	A communication abnormality occurred between the Digital Tuner (LNB/Digital Modulation IC) and IC. There is a high possibility of Digital Tuner (LNB/Digital Modulation IC) defect, or a communication failure between ICs.
3	A communication abnormality occurred between the Digital Tuner (OFDM/Digital Modulation IC) and IC, Digital Tuner (LNB/Digital Tuner Modulation IC) and IC. There is a high possibility of Digital Tuner (OFDM/Digital Modulation IC) defect, Digital Tuner (LNB/Digital Modulation IC) defect, or a communication failure between ICs.
Other	The Input Code is not correct. Please check the Diagnosis Code again.

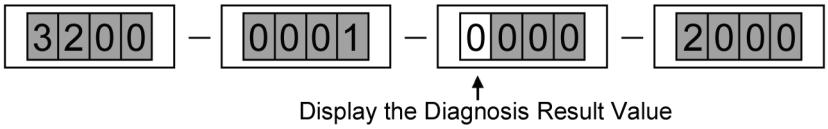
(3) Main P.C.B. IC communication (e.g. B-CAS/EEPROM)
Digital P.C.B. IC communication (e.g. Ether)



<Diagnosis Result Value>

0	No abnormality was detected.
2	An abnormality was detected in communication between the EEPROM of main P.C.B. and IC. Check the digital P.C.B. and main P.C.B. connection connector. If there is no problem, malfunction in the main P.C.B. is suspected.
4	Since a communication failure occurred between CPU and ETHER-LSI as well, there is a high possibility of digital P.C.B. circuit (such as foil cutting) or parts failure. Replace the Digital P.C.B..
6	A communication failure occurred between EEPROM of main P.C.B. and CPU, CPU and ETHER-LSI. Take measures for "2" and "4".
Other	The Input Code is not correct. Please check the Diagnosis Code again.

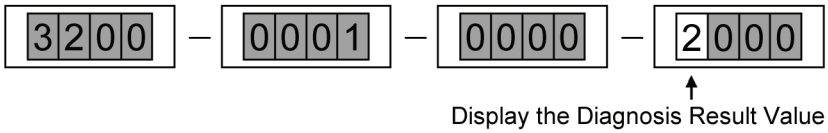
5. HDMI (SUB) Diagnosis



<Diagnosis Result Value>

0	No abnormality was detected in communication between the HDMI and IC.
2	An abnormality was detected in communication between the HDMI and IC. Please check the HDMI terminal connection and replace the HDMI terminal if no problem is found.
Other	The Input Code is not correct. Please check the Diagnosis Code again.

6. Failure History Analysis



<Diagnosis Result Value>

0	There is no information for failure history.
1	If there is malfunction in Drive diagnosis items, there is a possibility that the Drive itself fails. ◦ Prioritize the Drive diagnosis results. In addition, if there is no malfunction in Drive diagnosis items, there is a possibility that the cause of malfunction is in the digital P.C.B..
2	If there is malfunction in HDD diagnosis items, there is a possibility that the HDD itself fails. ◦ Prioritize the HDD diagnosis results. In addition, if there is no malfunction in HDD diagnosis items, there is a possibility that the cause of malfunction is in the digital P.C.B.
3	There are malfunctions in Drive diagnosis items and HDD diagnosis items. Take measures for "1" and "2".
4	The fan motor may fail. Check for any snapped wire in fan motor, connector, and lead wire.
5	There is malfunction in Drive diagnosis items and the fan motor may fail. Take measures for "1" and "4".
6	There is malfunction in HDD diagnosis items and the fan motor may fail. Take measures for "2" and "4".
7	There are malfunctions in HDD diagnosis items, Drive diagnosis items and the fan motor may fail. Take measures for "3" and "4".
Other	The Input Code is not correct. Please check the Diagnosis Code again.

4 Specifications

Power supply: AC 220 - 240V 50Hz
Power consumption: Approx. 30W
Power consumption in standby mode:
Approx. 0.2W
Quick Start=Off,RF OUT (Aerial Signal)=Off
Operating temperature: 5°C - 40°C
Operating humidity range: 10% - 80%RH (no condensation)

Television system
Tuner system: DVB-T
Country: Australia (PWT550GL)
New Zealand (PWT550GZ)
Channel Coverage: VHF:6 -12 (PWT550GL)
UHF:27 - 69 (PWT550GL)
UHF:21 - 69 (PWT550GZ)

Digital Audio Out (coaxial): 1pc
HDMI Out (19pin type A): 1pc
Internal HDD Capacity: 500GB
USB Port (Type A): USB2.0
2 pcs
SD Card Slot: 1pc
LAN (Ethernet) Port: 1pc
10 BASE-T/100BASE-TX

Wireless LAN:
Antenna: Tx2, Rx2
Standard Compliance: IEEE802.11a/b/g/n
Transmission system: OFDM system, DSSS system
Frequency Range: 2.4 GHz / 5 GHz band
Transfer rate (standard): IEEE802.11n: Max. 300 Mbps
IEEE802.11g: Max. 54 Mbps
IEEE802.11a: Max. 54 Mbps
IEEE802.11b: Max. 11 Mbps
* Transfer rates are theoretical values: however, actual communication rate will vary according to communication environment or connected equipment.
Access mode: Infrastructure mode
Security: WPA™/WPA2™ (Encryption type: TKIP/AES. Auterntication type:PSK)
WEP(64bit / 128bit)

Recording time

Approx.

Recording Mode	HDD (500GB)
DR *1 estimated bit rate (HD : 14Mbps PWT550GZ)	(PWT550GZ) 75 hours
(HD : 15Mbps PWT550GL)	211 hours (PWT550GL)
(SD : 5Mbps PWT550GZ)	69 hours
(SD : 8Mbps PWT550GL)	131 hours
HG	78 hours
HX	117 hours
HE	176 hours
HL	235 hours
HM	341 hours
XP	107 hours
SP	215 hours
LP	430 hours
EP	860 hours

*1. Recording time of DR mode may vary depending on the bit rate of broadcasting.

LASER specification
Class 1 LASER Product
Wave length: 783 nm(CDs) 661 nm(DVDs)
405 nm(BDs)
Laser power: No hazardous radiation is emitted with the safety protection
Region Code: DVD: #4
BD: Region B

Playable discs
BD-Video: (Blu-ray 3D,BD-LIVE)
BD-ROM Version 2.4
DVD-VIDEO: DVD-Video format
CD-DA: (Audio CD)
BD-RE: Based on Ver.2.1, other files(*3)
BD-RE DL: Based on Ver.2.1, other files(*3)
BD-R: Based on Ver.1.3 and LTH type Ver.1.3, other files(*3)
BD-R DL: Based on Ver.1.3, other files(*3)
DVD-R: DVD-Video format(*2), AVCHD format(*2), other files(*4)
DVD-R DL: DVD-Video format(*2), AVCHD format(*2), other files(*4)
DVD-RW: DVD-Video format(*2), DVD Video Recording format, AVCHD format(*2)
+R: DVD-Video format(*2), AVCHD format(*2)
+R DL: DVD-Video format(*2), AVCHD format(*2)
+RW: DVD-Video format(*2), AVCHD format(*2)
CD-R: CD-DA, other files(*5)
CD-RW: CD-DA, other files(*5)
*2: Finalizing is necessary.
*3: BD disc that is including other file needs to be based on UDF format.
*4: DVD disc that is including other file need to be based on UDF or ISO9660 format.
*5: CD disc that is including other file need to be based on ISO9660 format.

SD Card
SD Memory Card (includes SDHC,SDXC card)
Format:
SD Card only FAT12,FAT16
SDHC Card only FAT32
SDXC Card only exFAT

USB device
USB standard: USB 2.0 High Speed
USB mass storage device class is supported.
Standard Format: FAT12, FAT16, FAT32,NTFS

Broadcast Recordings
Number of title that can be recorded

	Maximum titles
HDD	3000

*Maximum numbers of titles is including recordings of HD CAM-CODER.

HD CAMCODER Recordings
MPEG-4 AVC/H.264 (baced on AVCHD)
Numbers of titles that can be record

	Maximum titles
HDD	3000

*Maximum numbers of titles is including recordings of HD CAM-CODER.

Photo files

JPEG based on DCF [Design rule for Camera File system]
MPO based on MPF [Multi Picture Format]
Pixcels: 34 x 34 ~ 8192 x 8192
Sub Sampling: 4:2:2, 4:2:0
Motion JPEG not supported.
Maximum numbers of contents

	folders	files
HDD	–	20000
BD-RE, DVD-R CD-R, CD-RW, USB, SD	500	10000

Video files Audio files

Support codecs of Video: Xvid, MKV, MP4 (4k30p), MPEG (TS/PS) *6
Support codecs of Audio: MP3, WAV, FLAC, AAC (M4A), WMA *6
*6: Supported codecs depend on media type.
Numbers of contents that can be copied to internal HDD

	Maximum numbers of folders and files
Video contents	20000
Audio contents	20000

HDMI

This unit supports "HDAVI Control 5" function.

Dimensions:

430mm(W) x 59mm(H) x 199mm(D) (exluding the projecting parts)
430mm(W) x 59mm(H) x 212mm(D) (inluding the projecting parts)

Mass: Approx .2.2kg

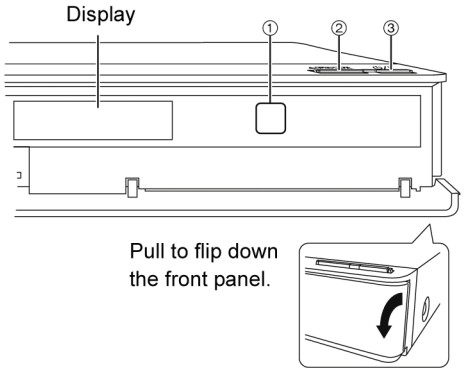
Solder: This model uses lead free solder(PbF).

Note:

Specifications are subject to change without notice.
Useable capacity will be less.(SD Card)

5 Location of Controls and Components

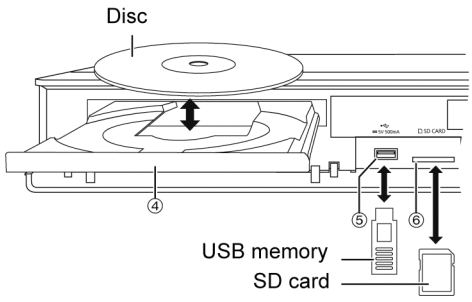
Main unit



① Remote control signal sensor
- Angle: Approx. 20° up and down, 30° left and right
- Distance: Within approx. 7 m in front of the unit

② Open/close disc tray

③ **Standby/on switch (⏻/I)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.



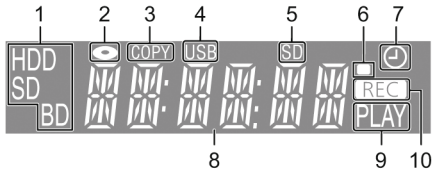
④ Disc tray

⑤ USB port

⑥ SD card slot
- When removing the SD card, press on the Centre of the card and pull it straight out.

- While writing to/reading from the media, do not switch the unit to standby mode or remove the media. Such action may result in loss of the media contents.
- When inserting the media, ensure that it is facing the right way up.

Display



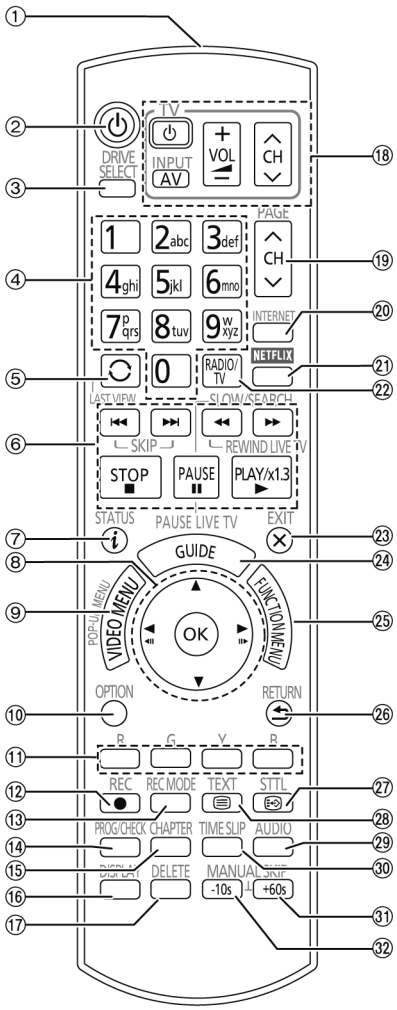
1 Drive (HDD, BD or SD) indicator
2 Disc indicator
3 Copying indicator
4 USB port indicator
5 SD card slot indicator
6 Remote control signal indicator
7 Timer recording indicator
This indicator lights up when the timer recording standby is activated.
8 Main display section indicator
- Current time
- Playback counter
- Various messages, etc.

9 Playback indicator
10 Recording indicator
- The indicator will light up while recording.
- The indicator will blink while recording is paused and before recording starts.

Control reference guide (PWT550GL)

Instructions for operations are generally described using the remote control.

Remote control



① Transmit the remote control signal
- Point it at remote control signal sensor on this unit.

② Switch the unit from on to standby mode or vice versa

③ Select drive (HDD, BD, SD or USB)

④ Select channels and title numbers, etc./Ente numbers or characters

⑤ Switch to the previously watched channel

⑥ Basic operations for recording and play, REWIND LIVE TV/PAUSE LIVE TV

⑦ Show Information

⑧ Selection/OK, Frame-by-frame

⑨ Show Video Menu, Top Menu, Pop-up Menu

⑩ Show OPTION menu

⑪ Colour buttons (Use in accordance with instruction on the screen.)

⑫ Start recording

⑬ Select a conversion mode/recording mode

⑭ Show the Timer Recording screen

⑮ Create chapter

⑯ Show Playback Menu

⑰ To delete unwanted recorded titles, timer programmes, video or music

⑱ TV operation buttons

⑲ Channel select /Change pages in the Video Menu screen etc.

⑳ Show the Network Service screen

㉑ Show NETFLIX screen

㉒ Switching to the radio channel list

㉓ Exit the menu screen

㉔ Show the TV Guide screen

㉕ Show the FUNCTION MENU screen

㉖ Return to previous screen

㉗ Show subtitles

㉘ Show Teletext

㉙ Select audio

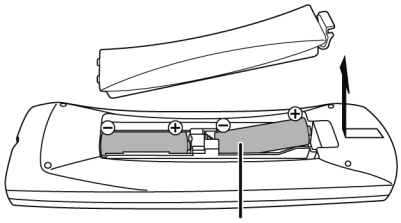
㉚ Skip the specified time

㉛ Skip approx. 1 minute forward

㉜ Skip approx. 10 seconds backward

Insert batteries

Insert so the poles (+ and −) match those in the remote control.

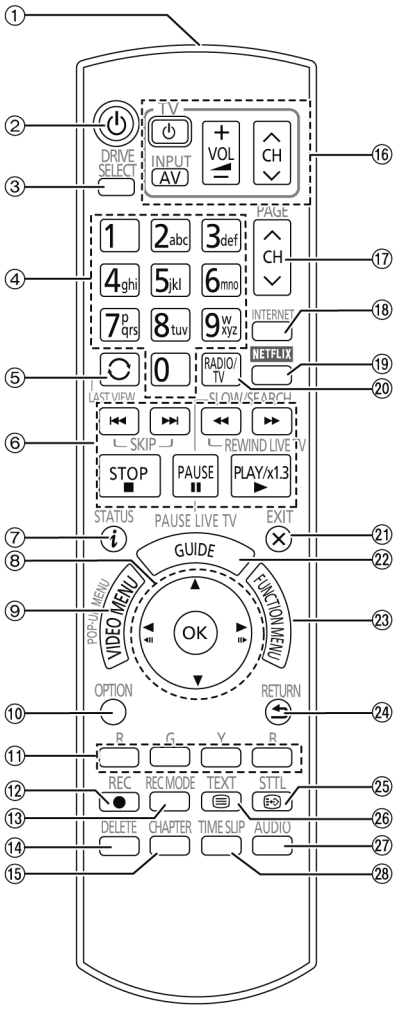


R6/LR6, AA
(Alkaline or manganese batteries)

Control reference guide (PWT550GZ)

Instructions for operations are generally described using the remote control.

Remote control



① Transmit the remote control signal
- Point it at remote control signal sensor on this unit.

② Switch the unit from on to standby mode or vice versa

③ Select drive (HDD, BD, SD or USB)

④ Select channels and title numbers, etc./Enter numbers or characters

⑤ Switch to the previously watched channel

⑥ Basic operations for recording and play, REWIND LIVE TV/PAUSE LIVE TV

⑦ Show Information

⑧ Selection/OK, Frame-by-frame

⑨ Show Video Menu, Top Menu, Pop-up Menu

⑩ Show OPTION menu

⑪ Colour buttons (Use in accordance with instruction on the screen.)

⑫ Start recording

⑬ Select a conversion mode/recording mode

⑭ To delete unwanted recorded titles, timer programmes, video or music

⑮ Create chapter

⑯ TV operation buttons

⑰ Channel select /Change pages in the Video Menu screen etc.

⑱ Show the Network Service screen

⑲ Show NETFLIX screen

⑳ Switching to the radio channel list

㉑ Exit the menu screen

㉒ Show the TV Guide screen

㉓ Show the FUNCTION MENU screen

㉔ Return to previous screen

㉕ Show subtitles

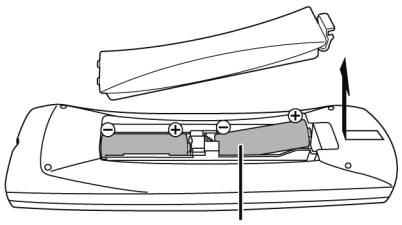
㉖ Show Teletext

㉗ Select audio

㉘ Skip the specified time

Insert batteries

Insert so the poles (+ and −) match those in the remote control.



R6/LR6, AA
(Alkaline or manganese batteries)

6 Installation Instructions

6.1. Taking out the Disc from BD-Drive Unit when the Disc cannot be ejected by [OPEN/CLOSE] button

6.1.1. Forcible Disc Eject

6.1.1.1. When the power can be turned off.

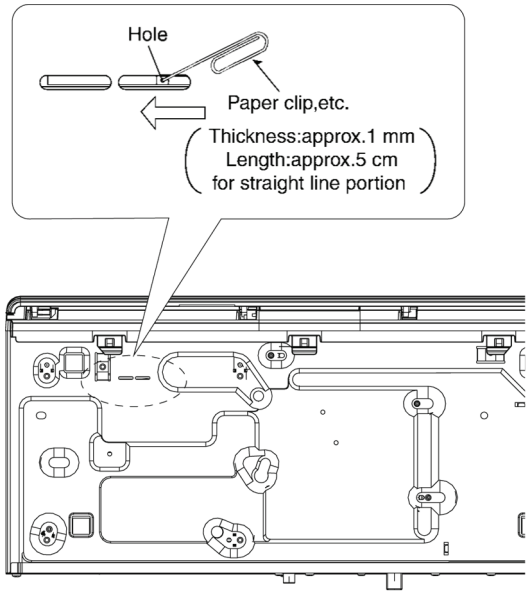
1. Turn off the power, press and hold [OK], [B] and [Y] on the remote control at the same time for more than 5 seconds.
   -"00 RET" is displayed on the unit's display.
2. Repeatedly press [▶] on the remote control or [POWER] on the unit until "06 FTO" is displayed on the unit's display.
3. Press [OK] on the remote control or [OPEN/CLOSE] on the unit.

6.1.1.2. When the power can not be turned off.

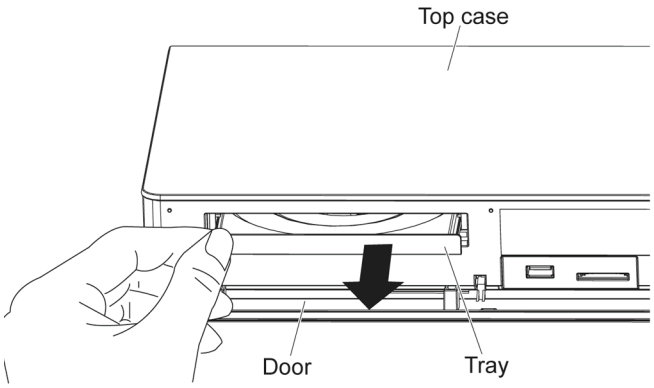
1. Press [POWER] key on the front panel for over 4 seconds to turn off the power forcibly, press and hold [OK], [B] and [Y] on the remote control at the same time for more than 5 seconds.
   -"00 RET" is displayed on the unit's display.
2. Repeatedly press [▶] on the remote control or [POWER] on the unit until "06 FTO" is displayed on the unit's display.
3. Press [OK] on the remote control or [OPEN/CLOSE] on the unit.

6.1.2. When the Forcible Disc Eject can not be done.

1. Turn off the power and pull out AC cord.
2. Put deck so that bottom can be seen.
3. Slide SLIDE CAM by Paper Clip or minus screw driver (small) in the direction of arrow to eject tray slightly.



4. Put deck upward, and pick out Tray by finger.



7 Service Mode

7.1. Self-Diagnosis and Special Mode Setting

7.1.1. Self-Diagnosis Functions

Self-Diagnosis Function provides information for errors to service personnel by “Self-Diagnosis Display” when any error has occurred.

U, H** and F** are stored in memory and held.**

You can check latest error code by transmitting [0] [1] of Remote Controller in Service Mode.

Automatic Display on FL will be cancelled when the power is turned off or AC input is turned off during self-diagnosis display is ON.

Error Code	Diagnosis Contents	Description	Monitor Display	Automatic FL display
U30	Remote control code error	Display appears when main unit and remote controller codes are not matched.	No display	BD * “*” is remote controller code of the main unit. Display for 5 seconds.
U59	Abnormal inner temperature detected	Display appears when internal temperature of deck reaches limit temperature. The power is turned off forcibly. For 30 minutes after this, all key entries are disabled. (Fan motor operates at the highest speed for the first 5 minutes. For the remaining 25 minutes, fan motor is also stopped.) The event is saved in memory as well.	No display	U59 “U59” is displayed for 30 minutes.
U61	The unit is carrying out its recovery process. (with no disc in the disc tray)	• The unit detected an error while recording or playing with no disc in the disc tray. The unit is carrying out its recovery process. This process restores the unit to normal operation. The unit is not broken. Wait until the message disappears.	No display	U61
U71	HDMI incompatible error (HDCP incompatible)	Display this error when the equipment (compatible with DVI such as TV, amplifier etc.) connected to the unit by HDMI is incompatible with HDCP. *HDCP=High-bandwidth Digital Content Protection	No display	U71
U72	HDMI connection error (Communication error)	This error is displayed when there are any communication problems with the unit and the equipments (TV, amplifier etc.) connected to the unit by HDMI. (or when there is a problem with the HDMI cable)	No display	U72 U72 display disappears when error has been solved by Power OFF/ON of connecting equipment or by inserting/removing of HDMI cable.
U73	HDMI connection error (authentication error)	When authentication error occurs while the equipments (TV, amplifier etc.) are connected by HDMI. (or when there is a problem with the HDMI cable)	No display	U73 U73 display disappears when error has been solved by Power OFF/ON of connecting equipment or by inserting/removing of HDMI cable.
U76	HDMI connection error	HDMI cannot be output because you are connected to a model that does not support copyright protection.	No display	U76
U77	Illegal disc error	Due to the current disc not having authorized copyright information, video output is not performed.	No display	U77

Error Code	Diagnosis Contents	Description	Monitor Display	Automatic FL display
U88	The unit is carrying out its recovery process. (with a disc in the disc tray)	• The unit detected an error while recording or playing with a disc in the disc tray. The unit is carrying out its recovery process. This process restores the unit to normal operation. The unit is not broken. Wait until the message disappears.	No display	U88
U99	Hang-up	Displayed when communication error has occurred between Main microprocessor and Timer microprocessor.	No display	U99 Displayed is left until the [POWER] key is pressed.
H19 02	Inoperative fan motor	When inoperative fan motor is detected after powered on, the power is turned off automatically. The event is saved in memory.	No display	No display
F00	No error information	Initial setting for error code in memory (Error code Initialization is possible with error code initialization and main unit initialization.)	No display	F00
F34	Initialization error when main microprocessor is started up for program recording	When initialization error is detected after starting up main microprocessor for program recording, the power is turned off automatically. The event is saved in memory.	No display	No display
F58	Drive hardware error	When Drive unit error is detected, the event is saved in memory.	No display	No display
F74	HDMI Device Key Communication error	HDMI connection could not be authenticated due to a transfer malfunction. Factor of HDMI Device key-road failure • When HDMI LSI is damaged. • When the bus line of I2C doesn't operate normally. • When device key information recorded is damaged.	No display	F74
F75	HDMI Device Key Information error	HDMI connection could not be authenticated due to an internal data malfunction. Factor of HDMI Device key-road failure • When HDMI LSI is damaged. • When the bus line of I2C doesn't operate normally. • When device key information recorded is damaged.	No display	F75
UNSUPPORT	Unsupported disc error	*An unsupported format disc was played, although the drive starts normally. *The data format is not supported, although the media type is supported. *Exceptionally in case of the disc is dirty.	**"This disc is incompatible."**	Displayed for 5 seconds. UNSUPPORT The character indication flows sideways.
NO READ	Disc read error	*A disc is flawed or dirty. *A poor quality failed to start. *The track information could not be read.	**"Cannot read. Please check the disc."**	NOREAD
HARD ERR	Drive error	The Drive detected a hard error.	"**BD Drive error."**	Display for 5 seconds. HARD ERR The character indication flows sideways.
SELF CHECK	Restoration operation	Since the power cord fell out during a power failure or operation, it is under restoration operation. *It will OK, if a display disappears automatically. If a display does not disappear,there is the possibility that defective Digital P.C.B. / BD Drive.	No display	SELF CHECK The character indication flows sideways.
PLEASE WAIT	Unit is in termination process	Unit is in termination process now. "BYE" is displayed and power will be turned off. In case "Quick Start" of setup menu is ON, it is displayed in restoration operation for AC off.	No display	PLEASE WAIT The character indication flows sideways.

Error Code	Diagnosis Contents	Description	Monitor Display	Automatic FL display
UNFORM-AT	Unformatted disc error	You have inserted an unformatted BD-RE, BD-R. DVD-RAM or DVD-RW that is unformatted or recorded on other equipment.	Format This disc is not formatted properly. Format the disc in DISK MANAGEMENT?	UNFOR MAT The character indication flows sideways.
IR ERR	IR communication error	[IR ERR] is displayed when communication between Timer microprocessor and IR microprocessor fails.	No display	IR ERR
No REC	Recording is impossible	[No REC] is displayed when recording is impossible due to the defect, dirt or wound of media.	No display	NoREC
HDD ERROR	[HDD ERR] is displayed when start up of HDD was failed. (Except error of setting of Power on Stand-by)	a) When normal start up was failed. b) When start up at HDD boot was failed. c) When start up from state of P-OFF was failed. d) When start up from state of HDD SLEEP was failed. [HDD ERR] is displayed when above each start up of HDD was failed. *In case b), tray opens automatically and [HDDERR] is displayed until version up disc is inserted.	No display	HDDERR
HDD NG	Power on Stand-by setting error	[HDD NG] is displayed when power on Stand-by setting of HDD is NG or when HDD which power on Stand-by is not set to is used. Please try to replace HDD with genuine HDD as service parts.	No display	HDD NG
NoERAS	Erase is impossible	You cannot delete items on this disc. The disc may be damaged. Use a new disc.	No display	NoERAS
NoWRIT	Writing is impossible	You cannot write to this disc. The disc may be damaged. Use a new disc.	No display	NoWRIT
PROG FULL	Timer programmes are full	There are already 32 timer programmes. Delete unnecessary timer programmes.	No display	PROG FULL

7.1.2. Special Modes Setting

* The command is transmitted by attached remote control.

Item		FL Display	Key Operation
Mode Name	**Description**		
Rating password	The audiovisual level setting password is initialized to “Level 8”.	① 00 RET ② 03 VL ③ INIT	①While the unit is on, disc is not in tray, press and hold [OK], [B] and [Y] on the remote control at the same time for more than 5 seconds. -"00 RET" is displayed on the unit's display. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until. "03 VL" is displayed on the unit's display. ③ Press [OK] on the remote control or [OPEN/CLOSE] on the unit.
Service Mode	Setting every kind of modes for servicing. *Details are described in **“7.1.3. Service-Mode at a glance”.**	② 70 RET ③ 80 SRV ④ HELLO--SERV	① While the power is off, press and hold [5], [9] and [R] on the remote control at the same time for more than 5 seconds. -"70 RET" is displayed on the unit's disply. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "80 SRV" is displayed on the unit's disply. ③ Press [OK] on the remote control or [OPEN/CLOSE] on the unit.
BD-ROM history cleaning	< Persistent Storage> of BD-ROM standard is cleaned. Screen display: [The history has been cleared.] is displayed for five seconds.	① 50 RET ② 51 NOP ③ 52 BRE	① While the unit is on, disc is not in tray, press and hold [6], [7] and [Y] on the remote control at the same time for more than 5 seconds. -"50 RET" is displayed on the unit's disply. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "51 NOP" is displayed on the unit's display.. ③ Press and hold [STOP] on the remote control until "52 BRE" is displayed on the unit's display. ④ Press [OK] on the remote control or [OPEN/CLOSE] on the unit.
Forced disc eject	Removing a disc that cannot be ejected. The tray will open and unit will shift to P-off mode. While Demonstration Lock is being set, this Forced disc eject function is not accepted.	① 00 RET ② 06 FTO	① While the power is off, press and hold [OK], [B] and [Y] on the remote control at the same time for more than 5 seconds. -"00 RET" is displayed on the unit's display. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "06 FTO" is displayed on the unit's display. ③ Press [OK] on the remote control or [OPEN/CLOSE] on the unit.
Forced power-off	When the power button is not effective while power is ON, turn off the power forcibly. *When Timer REC is ON or EXT-LINK is ON, execute "Forced Power-off" after releasing Timer REC or EXT-LINK.	Display in P-off mode.	Press [POWER] key over than 10 seconds.

Item		FL Display	Key Operation
Mode Name	**Description**		
Demonstration lock/unlock	Ejection of the disc is prohibited. The lock setting is effective until unlocking the tray and not released by Main unit initialization of service mode.	*When lock the tray. ① 00 RET ② 04 PRG ③ 10 OCL ④ LOCK "LOCK" is displayed for 3 seconds.	①While the unit is on, disc is in tray, press and hold [OK], [B] and [Y] on the remote control at the same time for more than 5 seconds. - "00 RET" is displayed on the unit's display. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "04 PRG" is displayed on the unit's display. ③ Press and hold [STOP] on the remote control until "10 OCL" is displayed on the unit's display. ④ Press [OK] on the remote control or [OPEN/CLOSE] on the unit.
		*When unlock the tray. ① 00 RET ② 04 PRG ③ 10 OCL ④ UNLOCK "UNLOCK" is displayed for 3 seconds.	① While the unit is on, disc is in tray, press and hold [OK], [B] and [Y] on the remote control at the same time for more than 5 seconds. - "00 RET" is displayed on the unit's display. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "04 PRG" is displayed on the unit's display. ③ Press and hold [STOP] on the remote control until "10 OCL" is displayed on the unit's display. ④ Press [OK] on the remote control or [OPEN/CLOSE] on the unit.
		*When press [OPEN/CLOSE] key while the tray being locked. LOCK Display "LOCK" for 3 seconds.	Press [OPEN/CLOSE] key while the tray is being locked.
Progressive initialization	The progressive setting is initialized to Interlace.	① 00 RET ② 04 PRG	① While the unit is on, press and hold [OK], [B] and [Y] on the remote control at the same time for more than 5 seconds. - "00 RET" is displayed on the unit's display. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "04 PRG" is displayed on the unit's display. ③ Press and hold [OK] on the remote control or [OPEN/CLOSE] on the unit for at least 3 seconds.
Switch the TV system	Switch the TV system to another one.	① 00 RET ② 05 P/N	① While the unit is on, press and hold [OK], [B] and [Y] on the remote control at the same time for more than 5 seconds. -"00 RET" is displayed on the unit's disply. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "05 P/N" is displayed on the unit's display. ③ Press and hold [OK] on the remote control or [OPEN/CLOSE] on the unit for at least 3 seconds.

Item		FL Display	Key Operation
Mode Name	**Description**		
Deep Colour Initialization	The Deep Colour setting is initialized.	① 00 RET ② 07 DC	① While the unit is on, press and hold [OK], [B] and [Y] on the remote control at the same time for more than 5 seconds. -"00 RET" is displayed on the unit's disply. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "07 DC" is displayed on the unit's display. ③Press and hold [OK] on the remote control or [OPEN/CLOSE] on the unit for at least 3 seconds.
CS reset	Reset the information about the following Service Mode. • Error History • BD Drive Last Error • Error Code • HDD Spin-up time • Laser Used Time	① 70 RET ② 93 FIN ③ FACT	① While the unit is on, press and hold [5], [9] and [R] on the remote control at the same time for more than 5 seconds. -"70 RET" is displayed on the unit's disply. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "93 FIN" is displayed on the unit's display. ③Press [OK] on the remote control or [OPEN/CLOSE] on the unit for at least 3 seconds.
Diagnosis Code display	Display the Diagnosis Code	① 70 RET ② 96 DIC ③ Diagnosis in progress. Please Wait	① While the unit is on, press and hold [5], [9] and [R] on the remote control at the same time for more than 5 seconds. -"70 RET" is displayed on the unit's disply. ② Repeatedly press [▶] on the remote control or [POWER] on the unit until "96 DIC" is displayed on the unit's display. ③ Press [OK] on the remote control or [OPEN/CLOSE] on the unit.

7.1.3. Service Modes at a glance

Information necessary for service can be displayed.

Service mode setting:

1. Turn the power off.
2. Press the [5] [9] and [R] button simultaneously for five seconds, then [70 RET] is displayed on FL.
3. Press the [▶] button to select until [80 SRV] is displayed on FL.
4. Press the [OK] button.
5. It is displayed on FL as [HELLO-->SERV].: It is shown to have entered the service mode.
6. The command is transmitted by attached remote control.

Method of making clear service mode: Press the power button (power off).

The display of information to each command is as follows.

NOTE:

Do not use it excluding the designated command.

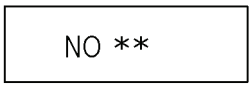
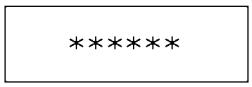
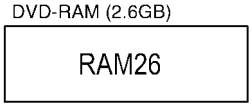
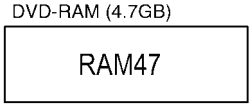
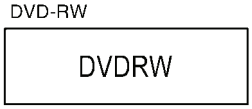
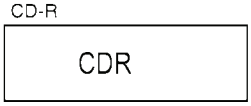
Item		FL Display	Key Operation
Mode Name	**Description**		**(Remote controller key)**
Release Items	Item of Service Mode executing is cancelled.	SERV	Press [0] [0] in service mode.
Error Code Display	Last Error Code of U/H/F held by Timer is displayed on FL. *Details are described in "**7.1.1. Self-Diagnosis Functions**".	♣□□ *♣ shows U/H/F. □□ shows number. If any error history does not exist, [F00] is displayed.	Press [0] [1] in service mode
ROM Version Display	The display contents are switched over every 5 seconds. 1. Region code 2. Main firm version 3. Timer firm version 4. Drive firm version 5. ROM correction version 6. BOO2 version 7. BOO3 version 8. CDDB version 9. Voice version	1. NO_$% $: Region of DVD (Example: 1,2.....) %: Region of BD (Example: A,B.....) 2. **** 3. ##0*** ##: Timer firm version O: OEM ***: Product number of microcomputer 4. **** ****: Drive version 5. *** 6. *** 7. ***	Press [0] [2] in service mode

Item		FL Display	Key Operation
Mode Name	Description		(Remote controller key)
		8. **** 9. ******	
Drive application check	Checking whether the drive is applicable drive or not.	When the drive is applicable drive. DRV OK When the drive is not applicable drive. DRV NG	Press [0] [3] in service mode.
HDD READ SEEK Inspection	Inspecting seek time of HDD to inspect performance .	At start AVSCAN ↓ * 00 ↓ The [*] sign is added every approx.10 seconds while inspect-ing. Two digits on the right side are the progress level of the inspection (The unit is %). Example on the way of inspection: *** 53 When HDD is OK after inspection: HDD OK (NG is displayed when error is excluding 0) (Transfer rate is calculated from the AV scanning result, and when it is less than 35Mbps, NG is displayed.) HDD $## $: [X] is displayed when seek time is over 270msec., there is error or transfer rate is NG. Position at $ is space when excluding those. ##: Number of data of over 100msec. and less than 270msec. When it is over 100, [99] is displayed. When the number is less than 5, we judge it normal.	Press [3] [1] in service mode. * When canceling the inspection mode while executing, do “forced power-off”. Method: Press [POWER] key on the main unit more than 4 seconds.

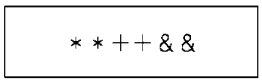
Item		FL Display	Key Operation
Mode Name	Description		(Remote controller key)
HDD READ VERIFY Inspection	Measure of access time in READ VERIFY MODE of HDD.	At start AVSCAN ↓ * 00 ↓ The [*] sign is added every approx 10 seconds while inspecting. Two digits on the right side are the progress level of the inspection (The unit is %). Example on the way of inspection: *** 53 When HDD is OK after inspection: HDD OK (NG is displayed when error is excluding 0) (Transfer rate is calculated from the AV scanning result, and when it is less than 35Mbps, NG is displayed.) HDD $## $: [X] is displayed when seek time is over 270msec., there is error or transfer rate is NG. Position at $ is space when excluding those. ##: Number of data of over 100msec. and less than 270msec. When it is over 100, [99] is displayed. When the number is less than 5, we judge it normal.	Press [3] [2] in service mode. * When canceling the inspection mode while executing, do “forced power-off”. Method: Press [POWER] key on the main unit more than 4 seconds.
HDD Spin-up time	The accumulation value of the Spin-up time of HDD is displayed.	****** Spin-up time of HDD is displayed. (The unit of display is hour.)	Press [3] [3] in service mode.

Item		FL Display	Key Operation
Mode Name	Description		(Remote controller key)
HDD Standard Speed Scan	Standard speed AV scan check of HDD	AVSCAN ↓ STEP 1 ↓ STEP 9 ↓ * 00 ↓ The [*] sign is added every 10 seconds while inspecting. Two digits on the right side are the progress level of the inspection (The unit is %). Example on the way of inspection: *** 53 When HDD is OK after inspection: HDD OK When HDD is NG after inspection: HDD *** [*] is the number of data of NG.	Press[3] [6]in service mode. * When canceling the inspection mode while executing, do "forced power-off". Method: Press [POWER] key on the main unit more than 4 seconds.
HDD Check	Simple quality judgment of HDD	HDDCHK ↓ When HDD is OK: HDD OK When HDD is NG: HDD NG	Press [3] [7] in service mode.

Item		FL Display	Key Operation
Mode Name	Description		(Remote controller key)
HDD/BD Drive Simple Check	Check if HDD Self-Diagnosis test was performed or Drive last error occurred within 4 weeks. * If the current date or the date when the error occurred is wrong, correct judgement may not be made.	HDD Self-Diagnosis test start. HDDCHK When HDD Self-Diagnosis test result is OK. HDD OK When HDD Self-Diagnosis test result is NG. HDD NG When the drive malfunction was detected within 4 weeks ago. DRV NG When the drive malfunction was detected more than 4 weeks ago or Drive last error data does not exist. DRV OK [HDD OK] from [DRV OK] are repeatedly displayed in turn.	Press [3][8] in service mode.
Laser Used Time Indication	Check laser used time (hours) of drive.	Laser used time: BD Playback BP**** Laser used time: BD Recording BR**** Laser used time: DVD Playback DP**** Laser used time: DVD Recording DR**** Laser used time: CD Playback CD**** Display those repeatedly. ●(*****) is the used time display in hour. ● Laser used time of BD/DVD/CD in Playback/Recording mode is counted.	Press [4] [1] in service mode.

Item		FL Display	Key Operation
Mode Name	Description		(Remote controller key)
BD Drive Last Error	BD Drive error code display. * For details about the drive error code, refer to the Service Manual for the specific BD Drive.	1. Error Number is displayed for 5 seconds.  2. Time when the error has occurred is display for 5 seconds.  YY: Year MM: Month DD: Day 3. Last drive error (1/2) is displayed for 5 seconds.  00 : Bad disc 03 : Bad disc 04 : Bad disc or drive malfunction 4. Last drive error (2/2) is displayed for five seconds.  5. Error occurring disc type is displayed for 5 seconds. DVD ROM  CD  DVD-RAM (2.6GB)  DVD-RAM (4.7GB)  DVD-R  DVD-RW  CD-R 	Press [4] [2] in service mode.

Item		FL Display	Key Operation
Mode Name	Description		(Remote controller key)
		CD-RW CDRW DVD+R DVDPR DVD+RW DVDPRW BD-ROM BDROM BD-RE BDRE BD-R BDR BD-ROM(Multiple Layer) BDXROM BD-RE(Multiple Layer) BDXRE BD-R(Multiple Layer) BDXR Others MEDIA* * s displayed the respoced value from RTSC. 6. Disc maker ID is displayed for 5 seconds. ******	In case that the maker cannot be identified, display is black out.

<table>
<tr><th colspan="2">Item</th><th rowspan="2">FL Display</th><th rowspan="2">Key Operation
(Remote controller key)</th></tr>
<tr><th>Mode Name</th><th>Description</th></tr>
<tr><td></td><td></td><td>
7. Factor of drive error (hexadecimal) occurring is left displayed.

＊＊：Error occurring operation code (This is not used)
＋＋：Error occurring disc type
<table>
<tr><td>00</td><td>DVD-ROM</td></tr>
<tr><td>01</td><td>CD</td></tr>
<tr><td>02</td><td>2.6GB DVD-RAM</td></tr>
<tr><td>03</td><td>4.7GB DVD-RAM</td></tr>
<tr><td>04</td><td>DVD-R</td></tr>
<tr><td>After 05</td><td>Others</td></tr>
</table>
&&：Error occurring disc situation
<table>
<tr><th rowspan="2">Display</th><th colspan="4">Detail</th></tr>
<tr><th>Disc distinction</th><th>With or without Cartridge</th><th>Disc cartridge state</th><th>Size</th></tr>
<tr><td>00</td><td>OK</td><td>With</td><td>Not opened</td><td>12cm</td></tr>
<tr><td>10</td><td>OK</td><td>With</td><td>Not opened</td><td>8cm</td></tr>
<tr><td>20</td><td>OK</td><td>With</td><td>Opened</td><td>12cm</td></tr>
<tr><td>30</td><td>OK</td><td>With</td><td>Opened</td><td>8cm</td></tr>
<tr><td>40</td><td>OK</td><td>Without</td><td>Not opened</td><td>12cm</td></tr>
<tr><td>50</td><td>OK</td><td>Without</td><td>Not opened</td><td>8cm</td></tr>
<tr><td>60</td><td>OK</td><td>Without</td><td>Opened</td><td>12cm</td></tr>
<tr><td>70</td><td>OK</td><td>Without</td><td>Opened</td><td>8cm</td></tr>
<tr><td>80</td><td>NG</td><td>With</td><td>Not opened</td><td>12cm</td></tr>
<tr><td>90</td><td>NG</td><td>With</td><td>Not opened</td><td>8cm</td></tr>
<tr><td>A0</td><td>NG</td><td>With</td><td>Opened</td><td>12cm</td></tr>
<tr><td>B0</td><td>NG</td><td>With</td><td>Opened</td><td>8cm</td></tr>
<tr><td>C0</td><td>NG</td><td>Without</td><td>Not opened</td><td>12cm</td></tr>
<tr><td>D0</td><td>NG</td><td>Without</td><td>Not opened</td><td>8cm</td></tr>
<tr><td>E0</td><td>NG</td><td>Without</td><td>Opened</td><td>12cm</td></tr>
<tr><td>F0</td><td>NG</td><td>Without</td><td>Opened</td><td>8cm</td></tr>
</table>
8. When the last error doesn't exist.

</td><td></td></tr>
</table>

<table>
<tr><th colspan="2">Item</th><th rowspan="2">FL Display</th><th rowspan="2">Key Operation
(Remote controller key)</th></tr>
<tr><th>Mode Name</th><th>Description</th></tr>
<tr><td>Laser power test</td><td>Drive state is judged based on difference between laser power value at shipping and present laser power value.</td><td>Measuring stars (Measuring in process).
POWER
When the measuring result is OK.
OK *
When the measuring result is NG.
NG *
When DVD-RAM is not inserted.
NODISC
When an error occurs while measuring.
ERROR
* is judgement result
<table><tr><th>*</th><th>Power value difference</th><th>Evaluation</th></tr><tr><td>0</td><td>1mW or less</td><td>Very good.</td></tr><tr><td>1</td><td>2mW or less</td><td>Good.</td></tr><tr><td>2</td><td>3mW or less</td><td>Bad.</td></tr><tr><td>3</td><td>4mW or more</td><td>Very bad.</td></tr></table>If disc in not inserteed, [NO DISC] is displayed.
If power value study was filed, [ERROR] is displayed.</td><td>1. Insert the 5X media DVD-RAM into the tray.
(Incompatible with other media)
2. Press [4] [4].</td></tr>
<tr><td>CEC (H) output</td><td>Check of the CEC terminal high output of HDMI.</td><td>When the check is OK
CECHOK
When the check is NG
CECHNG</td><td>Press [5] [5] in service mode.</td></tr>
<tr><td>CEC (L) output</td><td>Check of the CEC terminal low output of HDMI.</td><td>When the check is OK
CECLOK
When the check is NG
CECLNG</td><td>Press [5] [6] in service mode.</td></tr>
<tr><td>Production Date Display</td><td>Display the date when the unit was produced.</td><td>YYMMDD
YY: Year
MM: Month
DD: Day</td><td>Press[6][1]in service mode.</td></tr>
</table>

Item		FL Display	Key Operation
Mode Name	Description		(Remote controller key)
Display the Error History	Display the Error History stored on the unit. * If the current date or the date when the error occurred is wrong, correct judgement may not be made.	When the drive malfunction was detected within 4 weeks ago. (*) DRV NG When the drive malfunction was detected more than 4 weeks ago or Drive last error data does not exist. DRV OK When HDD Self-Diagnosis test result is NG. HDD NG When HDD Self-Diagnosis test result is OK. HDD OK The Error History is not Data for HDD and BD Drive. OK The Error History is not Data. NODATA HDD Self-Diagnosis test in process. HDDCHK	Press [6] [5] in service mode.
Save the error history to SD card	The error and user operation history of the remote control are saved to the SD card.	The SD card cannot be recognized NOCARD During saving SDSAVE Save end FIN	Press [6] [9] in service mode.
Registration of additional USB HDD	To register USB HDD for inspection. (Special mode)	When USB HDD is in Special mode (available for registered USB HDD): EXTHDD When Special mode failure (USB-HDD registration impossible): EXT NG	Press [7] [4] in service mode. * When releasing this mode, press the [POWER] button of the unit or Remote Control. After releasing the special mode, registration in the special mode is cancelled. Details are described in "3.1.3.1. Registering the USB HDD".

Item		FL Display	Key Operation
Mode Name	Description		(Remote controller key)
USB HDD READ SEEK Inspection	Inspecting seek time of USB HDD to inspect performance.	At start AVSCAN ↓ * 00 ↓ The [*] sign is added every approx. 10 seconds while inspecting. Two digits on the right side are the progress level of the inspection (The unit is %). Example on the way of inspection: *** 53 When USB HDD is OK after inspection: HDD OK (NG is displayed when error is excluding 0) (Transfer rate is calculated from the AV scanning result, and when it is less than 35Mbps, NG is displayed.) HDD$## $: [X] is displayed when seek time is over 270msec., there is error or transfer rate is NG. Position at $ is space when excluding those. ##: Number of data of over 100msec. and less than 270msec. When it is over 100, [99] is displayed. When the number is less than 5, we judge it normal. When the USB HDD is not applicable. NO_SUP	Press [7] [5] in service mode. * When cancelling the inspection mode while executing, do "forced power-off". Method: Press [POWER] key on the main unit more than 4 seconds.

Item		FL Display	Key Operation
Mode Name	Description		(Remote controller key)
USB HDD READ VERIFY Inspection	Measure of access time in READ VERIFY MODE of USB HDD.	At start AVSCAN ↓ * 00 ↓ The [*] sign is added every approx. 10 seconds while inspecting. Two digits on the right side are the progress level of the inspection (The unit is %). Example on the way of inspection: *** 53 When USB HDD is OK after inspection: HDD OK (NG is displayed when error is excluding 0) (Transfer rate is calculated from the AV scanning result, and when it is less than 35Mbps, NG is displayed.) HDD$## $: [X] is displayed when seek time is over 270msec., there is error or transfer rate is NG. Position at $ is space when excluding those. ##: Number of data of over 100msec. and less than 270msec. When it is over 100, [99] is displayed. When the number is less than 5, we judge it normal. When the USB HDD is not applicable. NO_SUP	Press [7] [6] in service mode. * When cancelling the inspection mode while executing, do "forced power-off". Method: Press [POWER] key on the main unit more than 4 seconds.

Item		FL Display	Key Operation
Mode Name	Description		(Remote controller key)
USB HDD Simple AV Scan Check	Simple AV scan check of USB HDD	AVSCAN ↓ STEP 1 ↓ STEP 9 ↓ * 00 ↓ The [*] sign is added every 10 seconds while inspecting. Two digits on the right side are the progress level of the inspection (The unit is %). Example on the way of inspection: *** 53 When USB HDD is OK after inspection: HDD OK When USB HDD is NG after inspection: HDD*** [*] is the number of data of NG.	Press [7] [7] in service mode. * When cancelling the inspection mode while executing, do "forced power-off". Method: Press [POWER] key on the main unit more than 4 seconds.
USB HDD Check	Simple quality judgement of USB HDD	HDDCHK ↓ When USB HDD is OK: HDD OK When USB HDD is NG: HDD NG	Press [7] [8] in service mode.
Tray OPEN/CLOSE Test	The tray is opened and closed repeatedly.	****** "*" is number of open/close cycle times.	Press [9] [1] in service mode *When releasing this mode, press the [POWER] button of Remote Controller.

Item		FL Display	Key Operation
Mode Name	**Description**		**(Remote controller key)**
Delete the Laser Used Time	Laser used time stored in the memory of the unit is deleted.	CLR	Press [9] [5] in service mode.
Delete the Last Drive Error	Delete the Last Drive Error information stored on the BD Drive.	CLR	Press [9] [6] in service mode.
Delete the Error History	Delete Error History information stored on the unit is deleted.	CLR	Press [9] [7] in service mode.
Error code Initialization	Information of the last error code held by timer. (Write in F00)	CLR	Press [9] [8] in service mode.
Initialize Service	Last Drive Error, Error History and Error code information stored on the unit are initialized to factory setting.	CLR	Press [9] [9] in service mode.
Finishing service mode	Release Service Mode.	Display in STOP (E-E) mode. ******	Press power button on the front panel or Remote controller in service mode.

8 Service Fixture & Tools

Part Number	Description	Pcs	Compatibility
RFKZ0216	Extension Cable (Digital P.C.B. - Main P.C.B./ 23 Pin)	1	Same as BWT945GL Series
RFKZ0455	Extension Cable (Digital P.C.B. - HDD / 7 Pin)	1	Same as BWT945GL Series
RFKZ0577	Extension Cable (Digital P.C.B. - HDD / 15 Pin)	1	Same as BWT945GL Series
SUKZ000007 (*1)	Extension Cable (Digital P.C.B. - BD Drive / 18 Pin)	1	Same as BWT945GL Series
SVKZ000001	Lead Free Solder (0.3mm/100g Reel)		Same as BWT945GL Series
SVKZ000002	Lead Free Solder (0.6mm/100g Reel)		Same as BWT945GL Series
SVKZ000003	Lead Free Solder (1.0mm/100g Reel)		Same as BWT945GL Series
RFKZ0316	Solder Remover (Lead free low temperature Solder/50g)		Same as BWT945GL Series
RFKZ0328	Flux		Same as BWT945GL Series

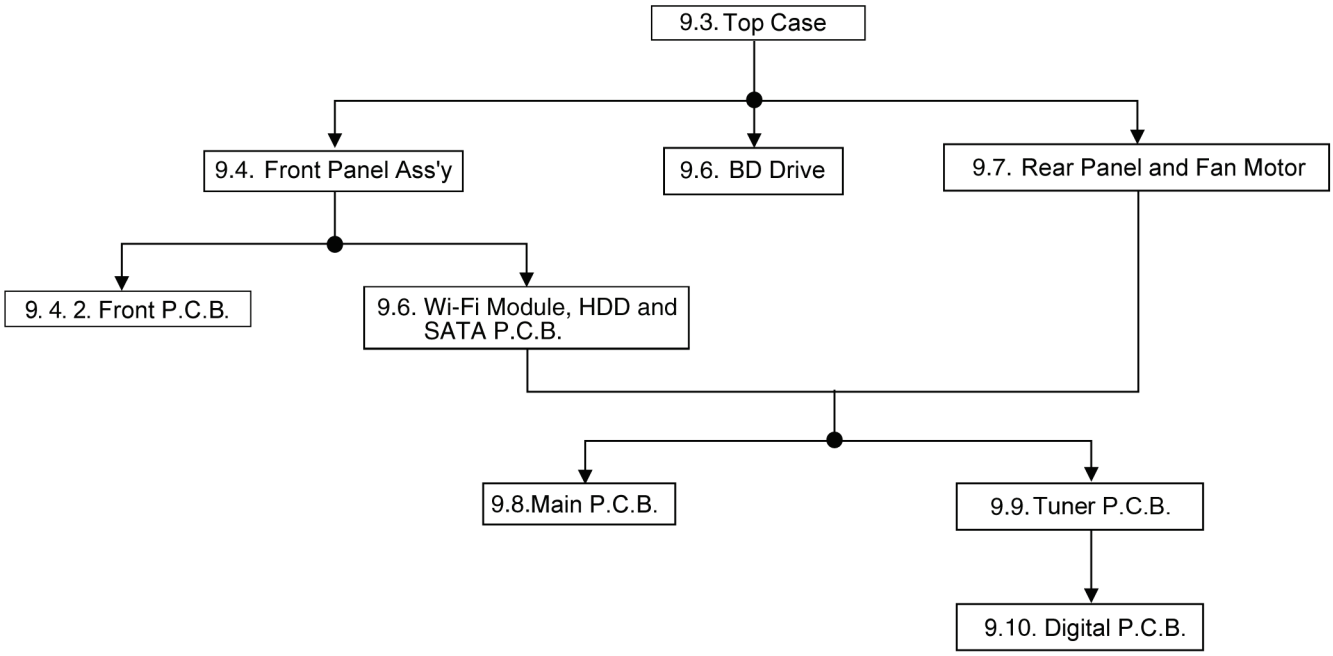
*** The above parts are supplied by AVC-CSC-SPC.**

***1. Supplied by CHPAVC.**

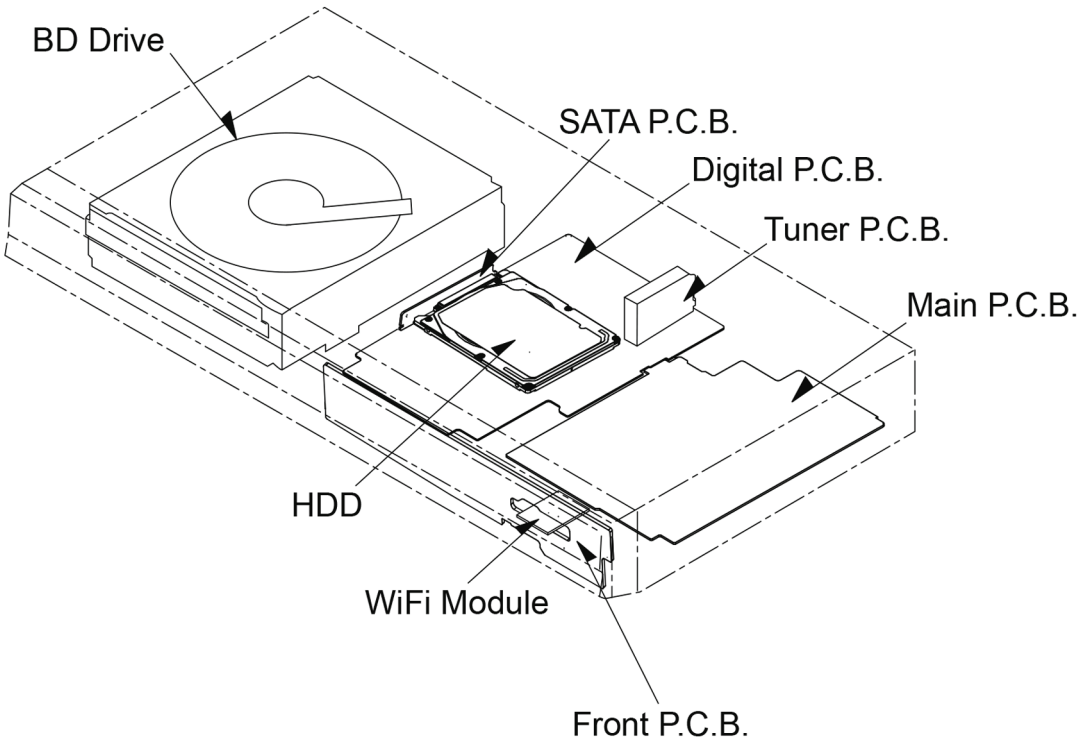
9 Disassembly and Assembly Instructions

9.1. Disassembly flow chart

The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.
To assemble the unit, reverse the steps shown in the chart below.

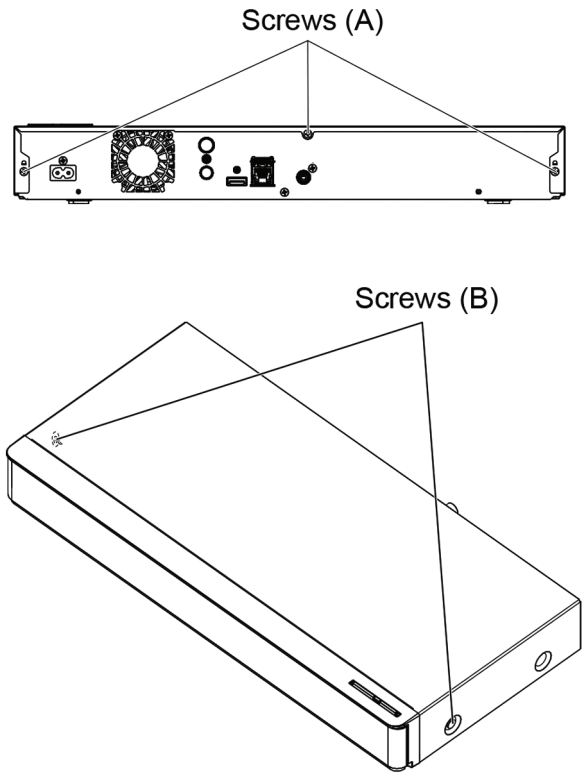


9.2. P.C.B. Positions

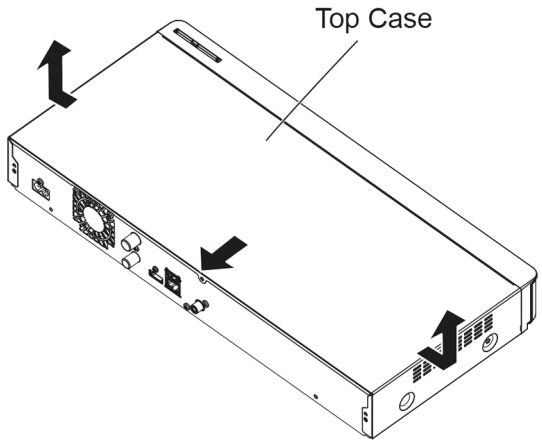


9.3. Top Case

1. Remove the 3 screws (A) and 2 screws (B).



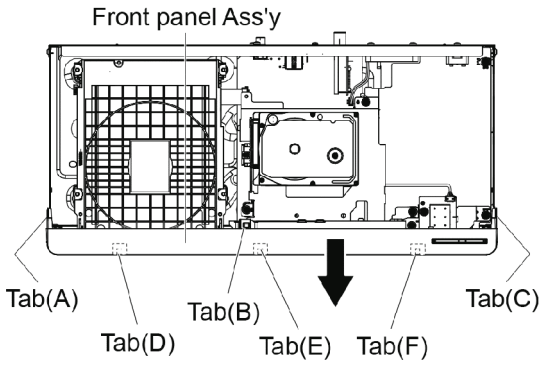
2. Slide the Top Case rearward and open the both ends at rear side of the Top Case a little and lift the Top Case in the direction of the arrows.



9.4. Front Panel Ass'y

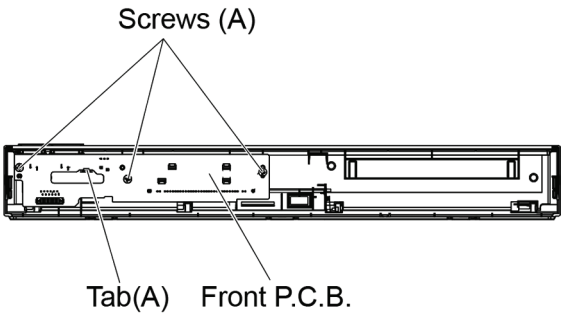
9.4.1. Front Panel

1. Unlock 6 tabs (A) - (F).
2. Pull with the front panel in the direction of your side.



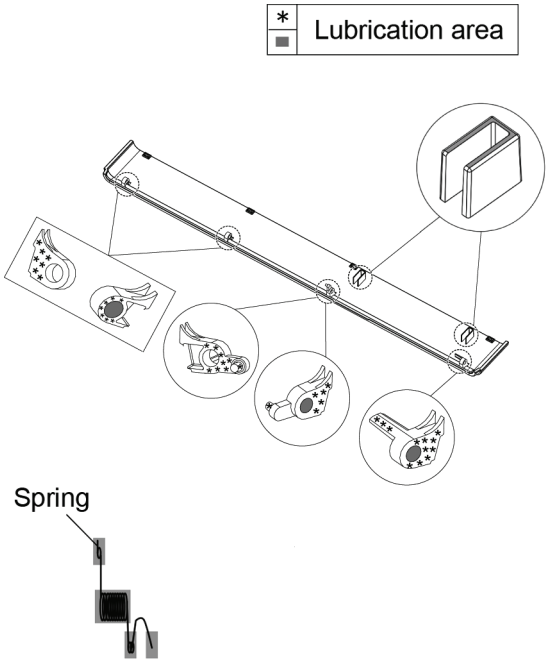
9.4.2. Front P.C.B.

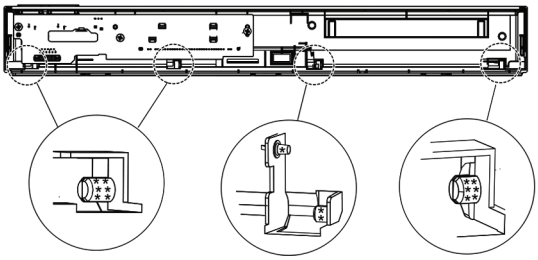
1. Remove the 3 Screws (A).
2. Unlock 1 tab (A).



9.4.3. How to assemble Door ass'y

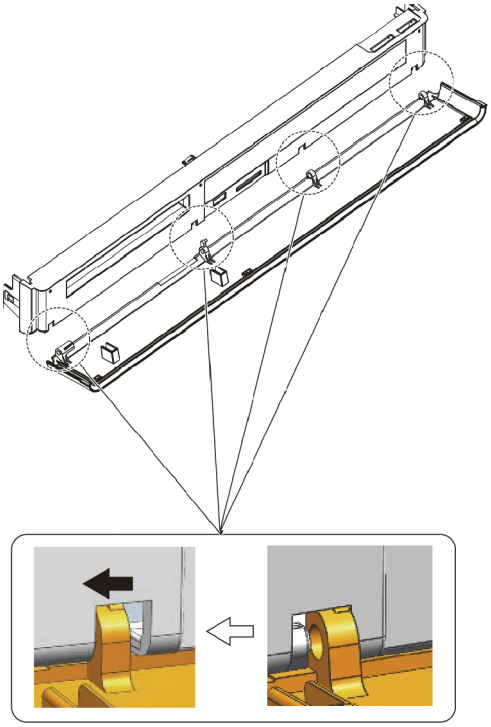
1. Application of the Lubricant to Door Ass'y.
   a. Lubrication points on Door ass'y and Front Panel are shown in the figure as below.



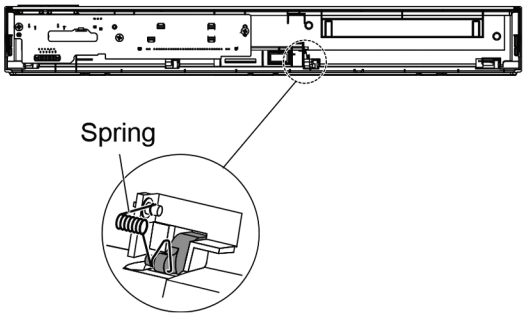


   b. Since the replaced parts are not lubricated, please apply lubricant to the specified points (RFKXGUD24).
   c. Use Cotton Swab to spread thinly.

2. Install each roller of the door in the sequence as shown in the figure.



3. Install 1 springs in place in the sequence as shown in the figure.



9.5. Wi-Fi Module , HDD and SATA P.C.B.

Data of HDD:
Make sure to order the Part No., SUCV**HDK in Replacement Parts List when replacing the HDD.**
The following data has been written on SUCV**HDK.**
· Main Firm
· CD DB Data
· Other Data

Caution:
No use HDD (SUCV**HDK) of the capacity of the other model use.**

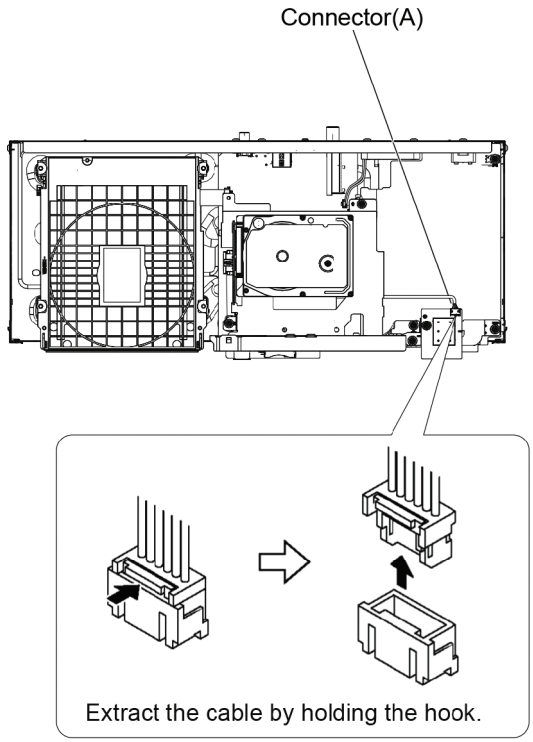
When replacing HDD,"HDD Error"indication is displayed and HDD must be formatted.

*How to format HDD
Please refer to Service Navigation, and Format HDD.

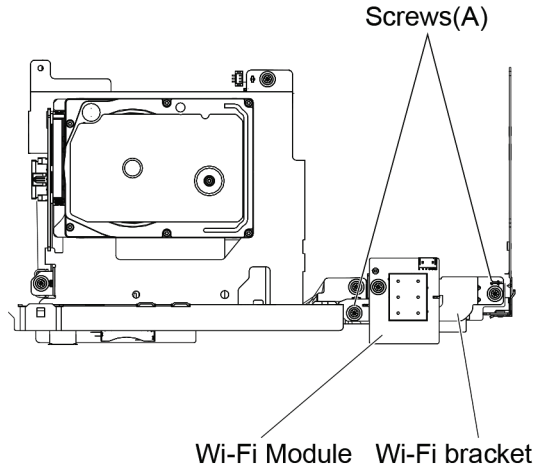
Handling of HDD
The following precautions should be taken when handling HDD.
a. Never give an impact to HDD. (Even a drop from 1cm height can be a cause of HDD failure.
b. When placing HDD on a workbench, provide a mat on a bench for shock absorption and anti-static purposes.
c. When installing HDD, release it from your hands only after confirming that it is fully set on the chassis.
d. Avoid stacking up HDD.
e. HDD is unstable and easy to fall. Do not stand it on its side face.
f. When handling HDD, hold its side faces to avoid static hazard.
g. Do not place HDD on its wrapping bag after removal. (Prevention of static hazard
h. Use a screwdriver with low impact and anti-static features.

Note:
When replacing HDD, please make the rear jumper slave or cable select configuration.

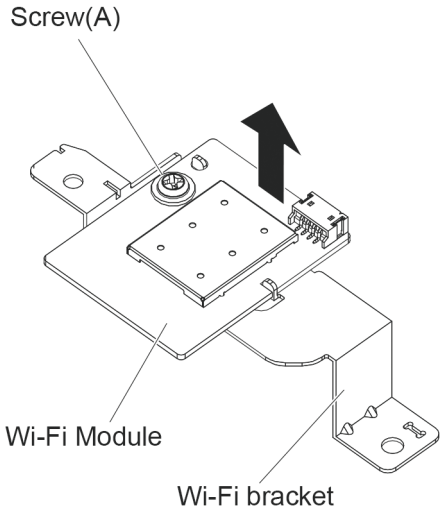
1. Disconnect the Connector (A) of WLAN Cable.



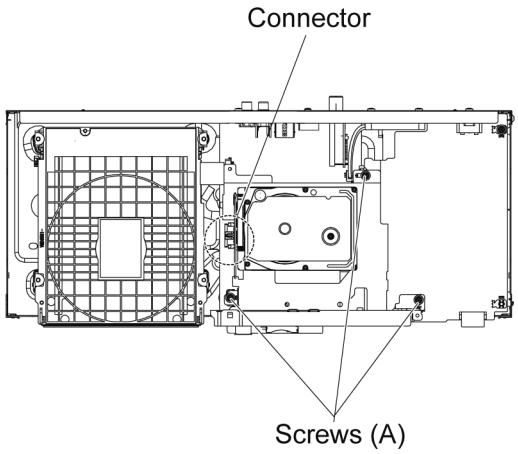
2. Remove 2 Screws (A) to remove Wi-Fi Module and WI-FI BRACKET.

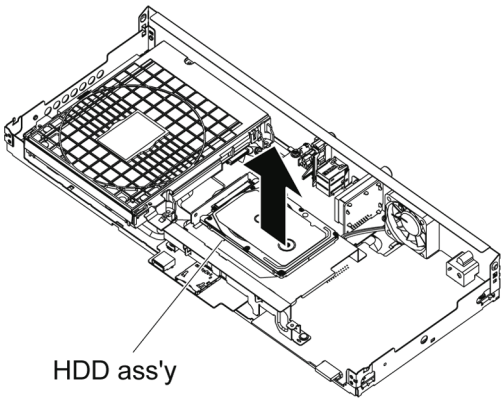


3. Remove 1 Screw (A) to remove Wi-Fi Module.

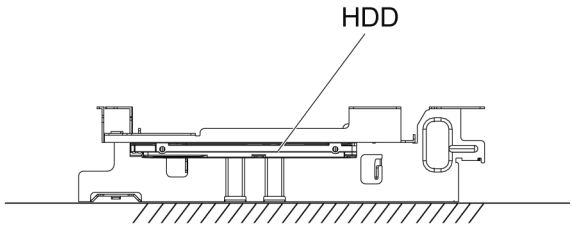


4. Remove 3 Screws (A) and disconnect the connector of SATA P.C.B.to remove HDD ass'y.

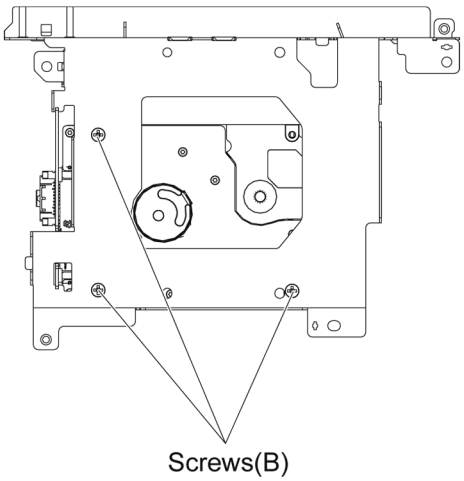




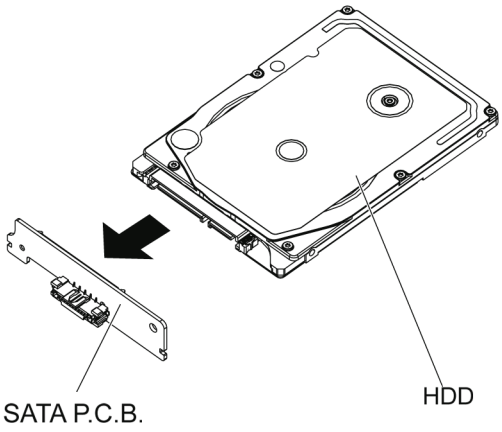
5. Put HDD up and down inversely so as not to give a shock to HDD.



6. Remove 3 Screws (B) to remove HDD from HDD Bracket.

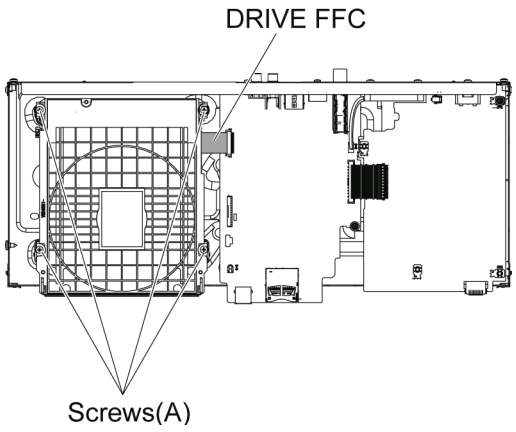


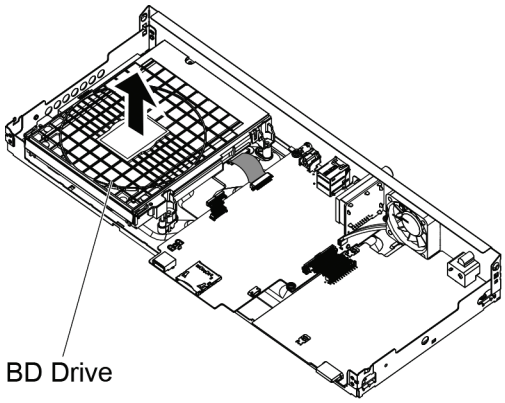
7. Pull up SATA P.C.B. in the direction of the arrow.



9.6. BD Drive

1. Disconnect the connector of DRIVE FFC .
2. Remove the 4 Screws (A) to remove BD Drive.

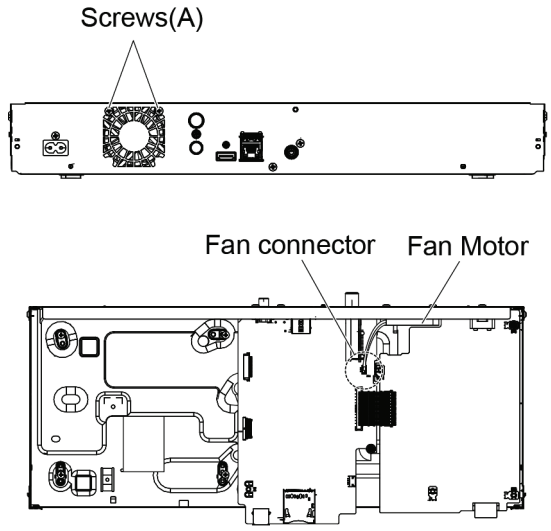




9.7. Rear Panel and Fan Motor

9.7.1. Only Fan Motor

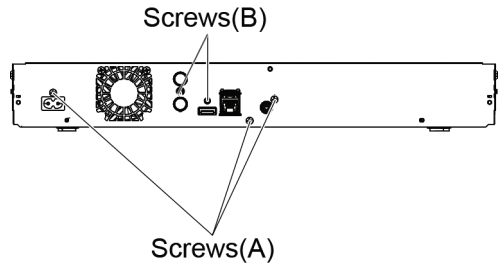
1. Remove 2 Screws (A) and disconnect the Fan connector.



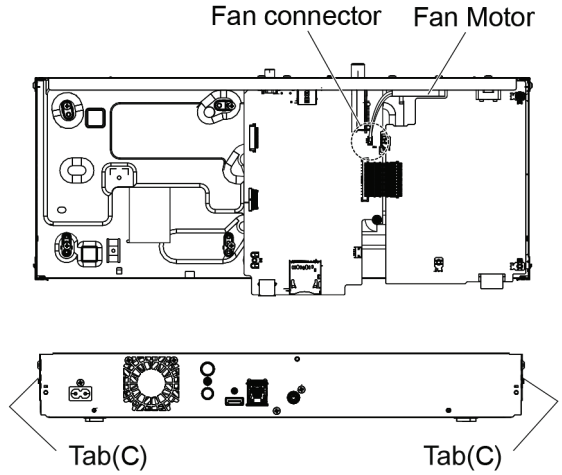
2. Remove the Fan Motor.

9.7.2. Rear Panel with Fan Motor

1. Remove 3 Screws (A) and 2 Screw (B).



2. Disconnect the Fan connector and unlock 2 locking tabs (C) to remove Rear Panel.

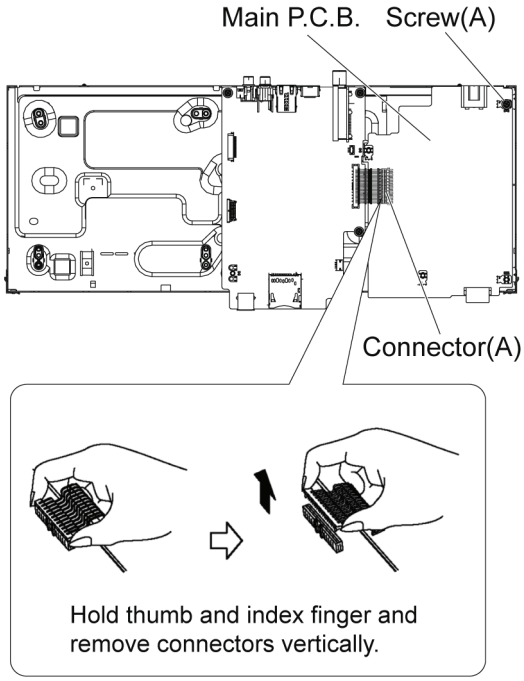


9.8. Main P.C.B.

When replacing Main P.C.B., "HDD Error" indication is displayed and HDD must be formatted.

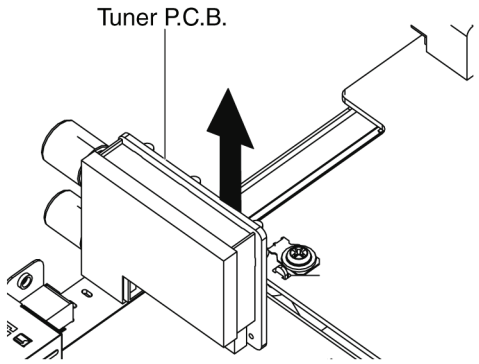
*How to format HDD
Please refer to Service Navigation, and Format HDD.

1. Disconnect 1 connector (A).
2. Remove 1 Screw (A) to remove Main P.C.B.



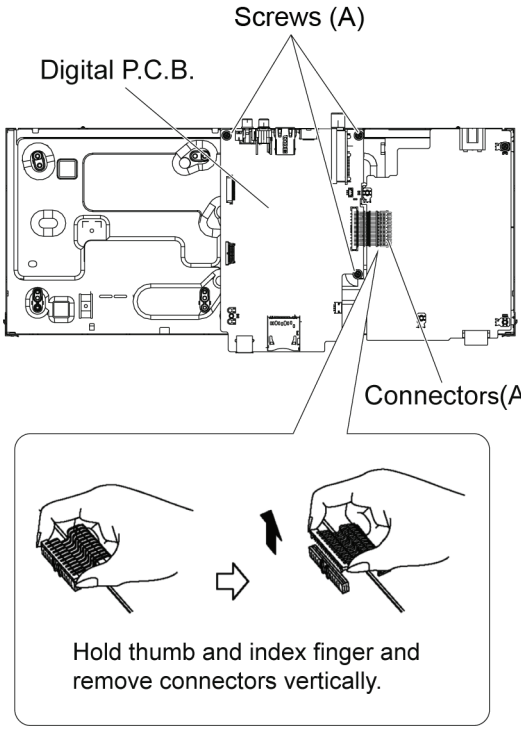
9.9. Tuner P.C.B.

1. Pull up Tuner P.C.B. in the direction of the arrow.



9.10. Digital P.C.B.

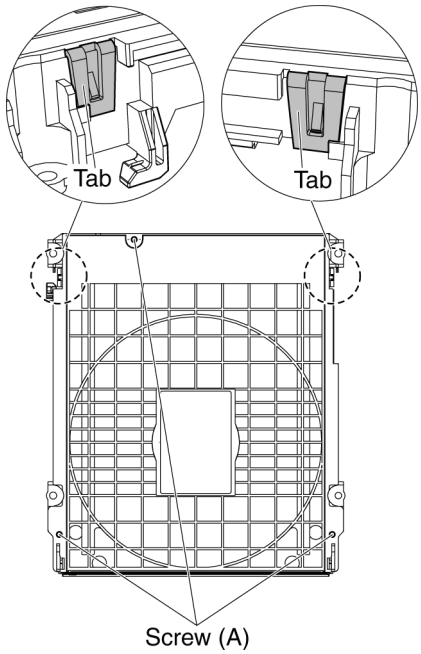
1. Disconnect 1 connector (A).
2. Remove 3 Screws (A) to remove Digital P.C.B..



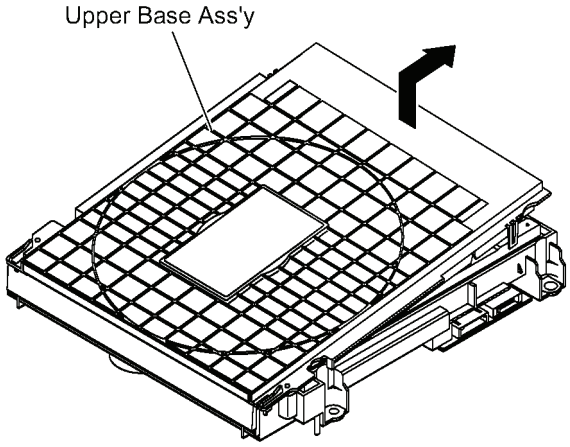
9.11. BD Drive

9.11.1. Upper Base Ass'y

1. Remove 3 Screws (A),and push the 2 Hooks in.

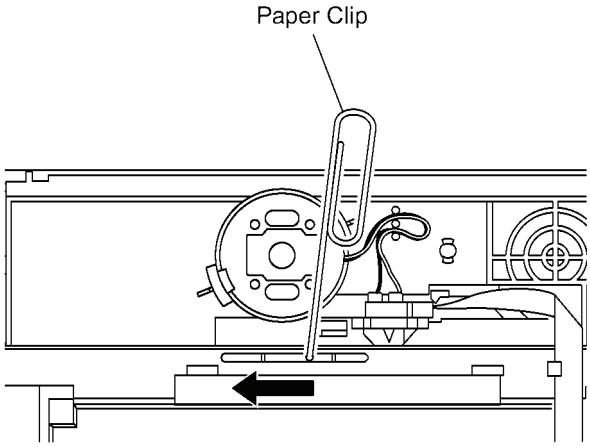


2. Lift up the Upper Base Ass'y, and pull it out to the direction of arrow.

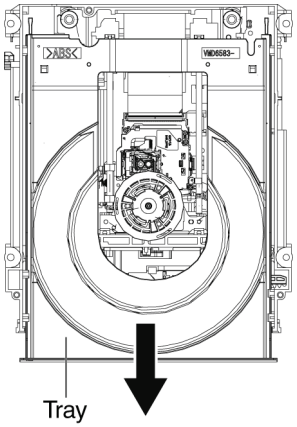


9.11.2. Tray

1. Perform the step "9.12.1.Upper Base Ass'y".
2. Insert the Paper Clip into the hole of the bottom side, and slide it to the direction of arrow until it can be.

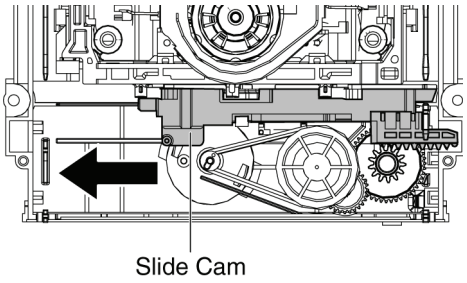


3. Pull the Tray to the direction of arrow.



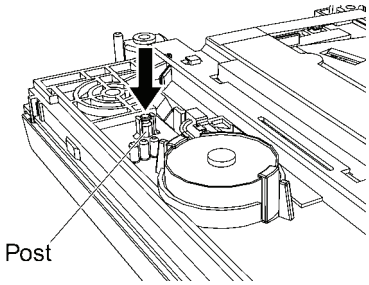
Notes when attaching the tray:

Pull the Slide Cam to the left side and insert the tray when attaching.

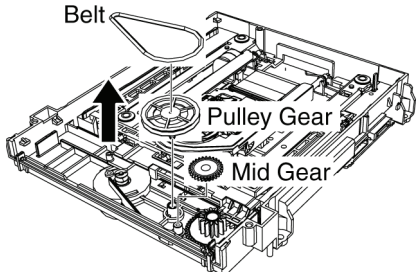


9.11.3. Pulley Gear, Belt and Mid Gear

1. Perform the step"9.12.2.Tray".
2. Push the post to the direction of arrow by using the slotted screwdriver.

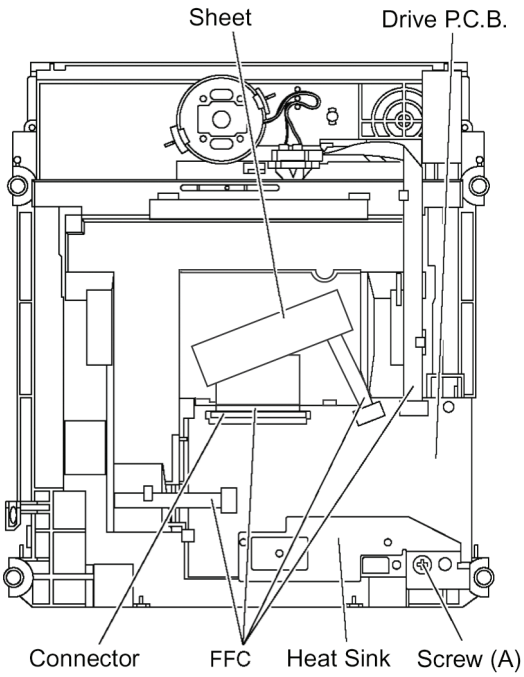


3. Remove the Pulley Gear, Belt and Mid Gear.



9.11.4. Slide Cam

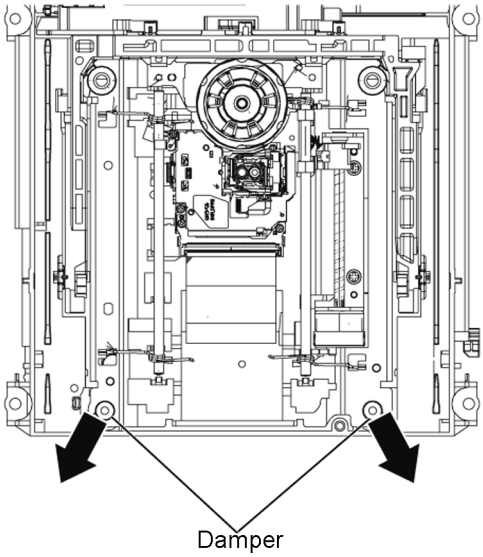
1. Perform the step"9.12.3.Pulley Gear,Belt and Mid Gear".
2. Remove the sheet.
3. Open the connector lock, and disconnect the 4 FFCs.
4. Remove the Screw (A), Heat Sink and Drive P.C.B..



Caution:

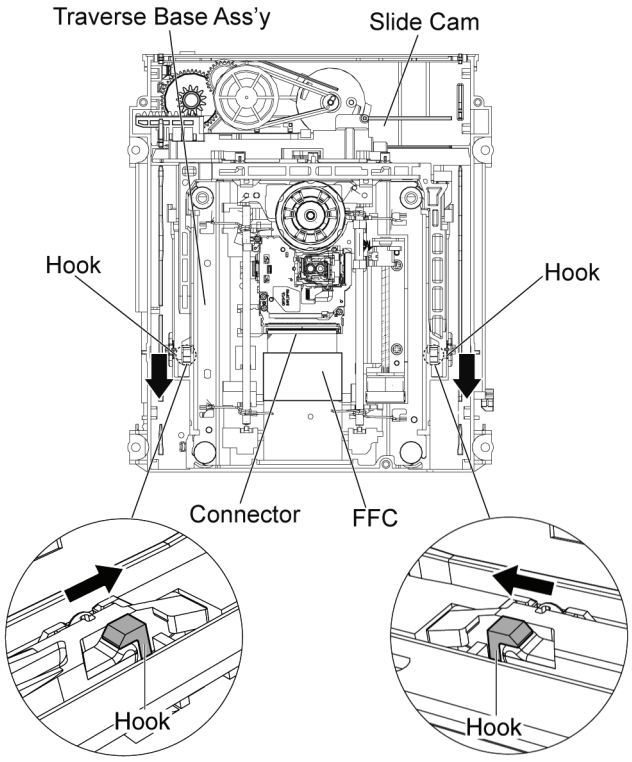
Though the Drive P.C.B. is not supplied as replacement parts,it must be removed for after disassembling.

5. Remove the 2 Dampers.

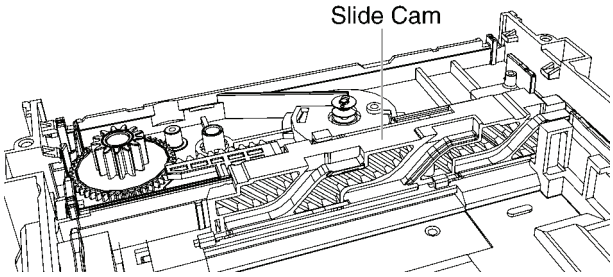


6. Open the connector lock, and disconnect the OPU FFC.
7. Pull the Slide Cam to the right side.

8. Remove the Traverse Base Ass'y with spreading the 2 Hooks to the direction of arrows.

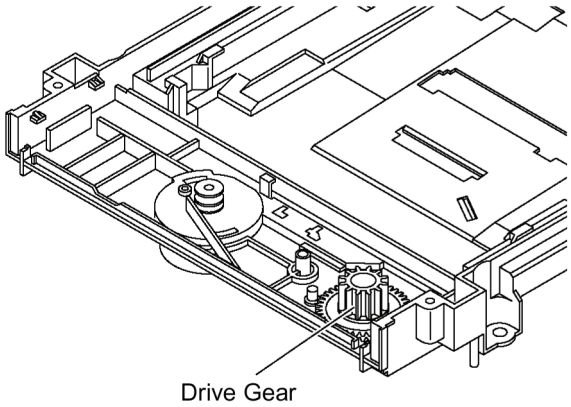


9. Remove the Slide Cam.



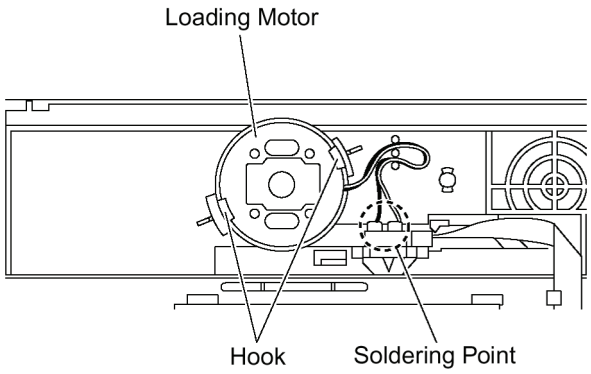
9.11.5. Drive Gear and Loading Motor

1. Perform the step"9.12.4.Slide Cam".
2. Remove the Drive Gear.



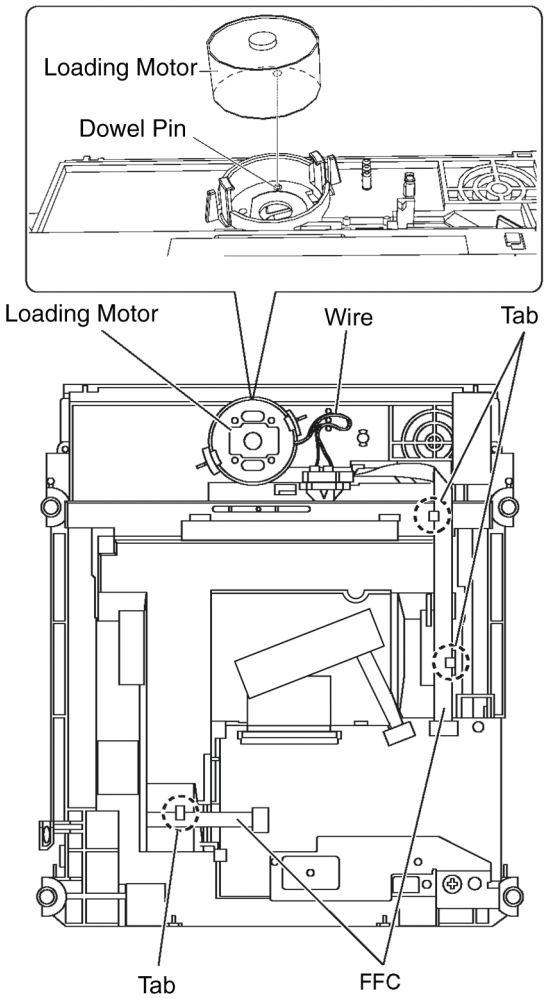
3. Remove the 2 soldering points.

4. Spead the 2 hooks to remove the Loading Motor.

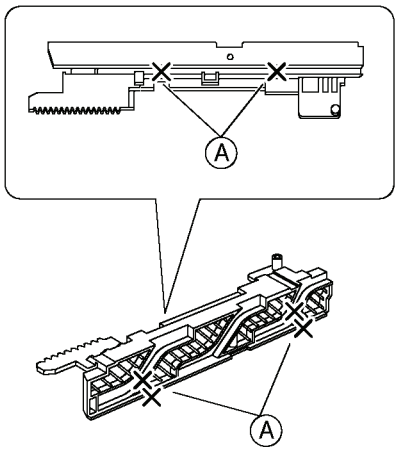


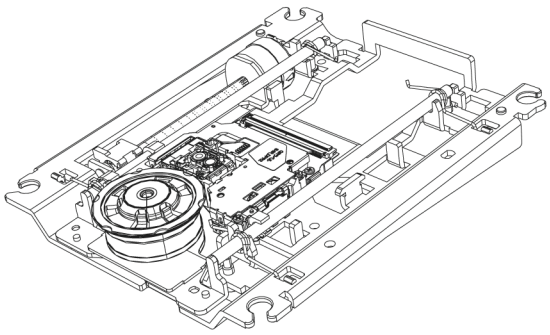
Notes when assembling:

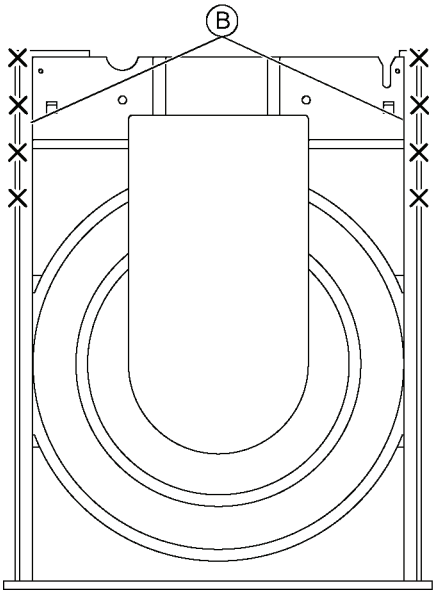
a. Align the location hole of the loading motor with the base dowel pin.
b. The fixing style for the wire rod of the loading motor is shown in the figure.
c. The stationary jaw of FFC is shown in the figure.

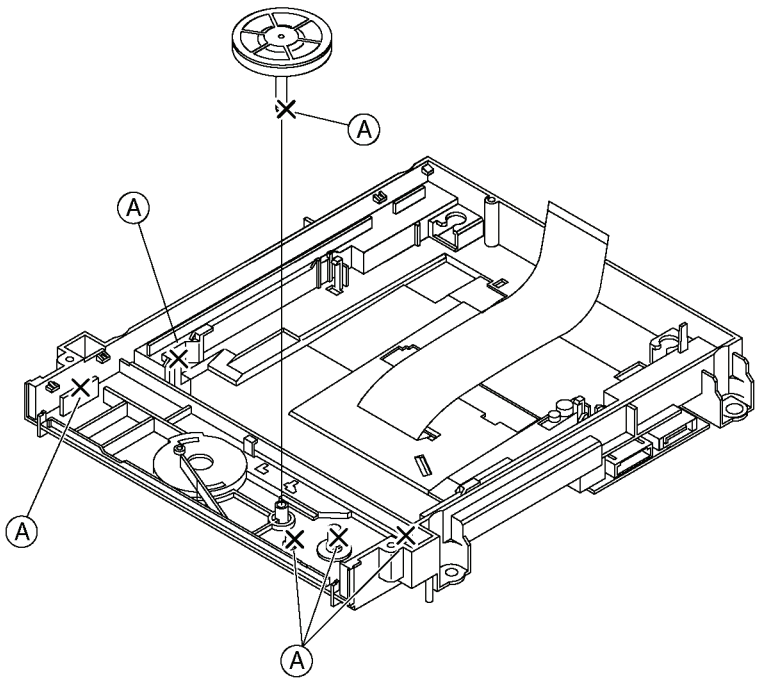


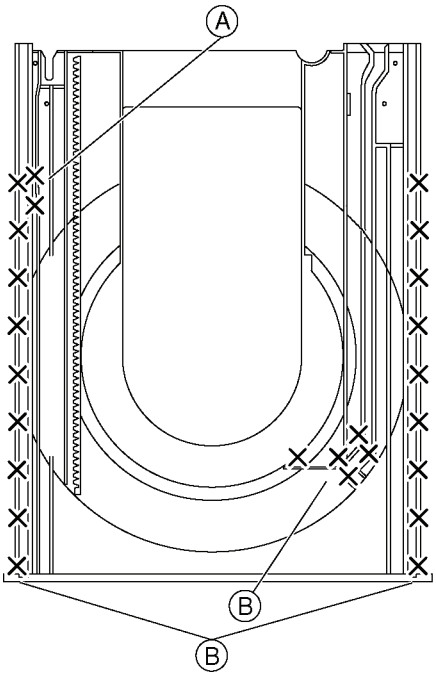
9.11.6. Grease









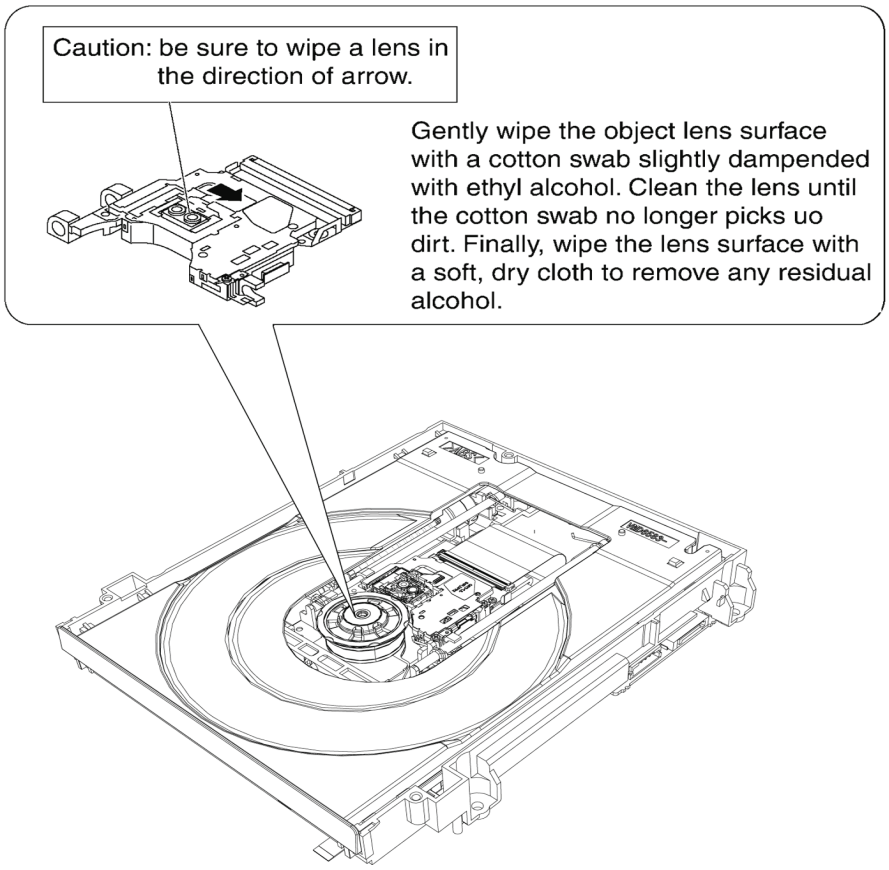


LUBRICATION POINTS

When the above parts are replaced, apply the recommended lubricants or adhesive for better maintenance of the unit.

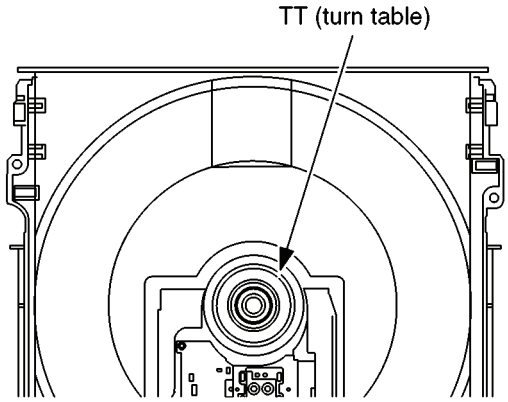
Mark	Kind of lubricant	Part No.
Ⓐ	Grease	RFKZ0484
Ⓑ	Hanarl	RFKZ0441

9.11.7. How to Clean the Lens of Optical Pick-UP

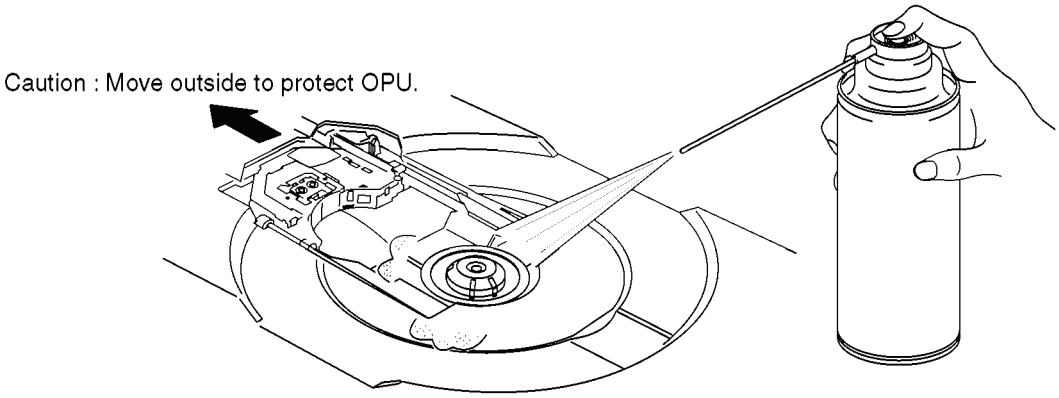


9.11.8. Service hint

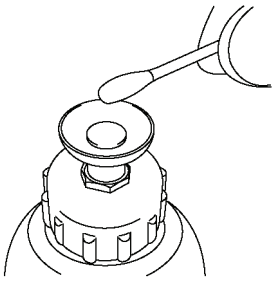
If a defective phenomenon is "NO READ", please try to clean TT (turn table) in the drive in according to the following procedure.



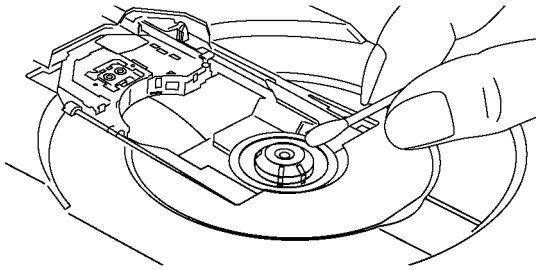
1. Blow off dust on TT by a blower. (Air must not blow to it strongly.)



2. Apply one drop of ethyl alcohol or isopropyl alcohol on a clean cotton swab.
   (Always use a fresh cotton swab free from any additive or chemical.)



3. Lightly put the cotton swab on TT, and wipe it by turning by your finger.
   (Donìt touch the surface of TT when you turn it.)



10 Measurements and Adjustments

10.1. Service Positions

NOTE:

For description of the disassembling procedure, see the section 9.

10.1.1. Checking and Repairing of HDD

1. Top Case

Remove 2 screws on side.

Remove 3 screws on rear, remove Top Case.

2. Front Panel Ass'y

Unlock 6 tabs turn and remove Front Panel Ass'y.

3. Wi-Fi Module, HDD and SATA P.C.B.

Disconnect the connector of WLAN Cable.

Remove 2 Screws to remove Wi-Fi Module and WI-FI BRACKET.

Remove 1 Screw to remove Wi-Fi Module.

Remove 3 Screws and disconnect the connector of SATA P.C.B.to remove HDD with HDD bracket.

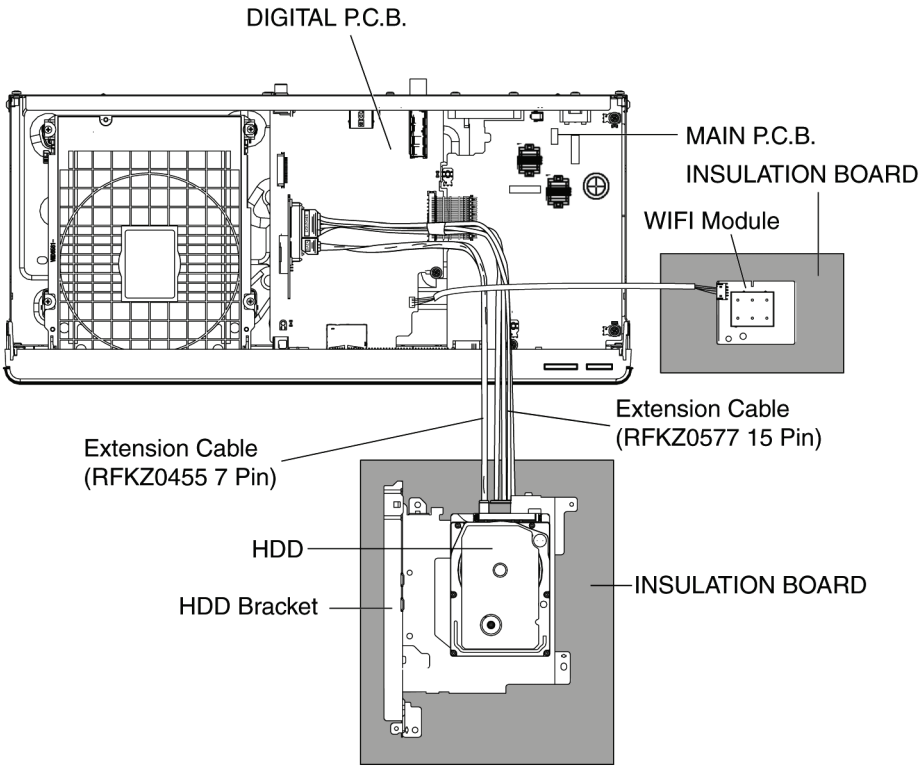
Remove 3 Screws to remove HDD from HDD Bracket.

Pull up SATA P.C.B..

Connect the Wi-Fi Module to the Digital P.C.B. with WLAN Cable.
Assemble Front Panel.
Connect the SATA P.C.B.to the Digital P.C.B..
Assemble the HDD to the HDD Bracket.

Connect Extension Cables shown below.
Between HDD and Digital P.C.B. (RFKZ0577) 15 Pin.
Between HDD and Digital P.C.B. (RFKZ0455) 7 Pin.

Caution :
1.Red wire should be connected to pin 1.



10.1.2. Checking and Repairing of BD Drive

1. Top Case

Remove 2 screws on side.

Remove 3 screws on rear, remove Top Case.

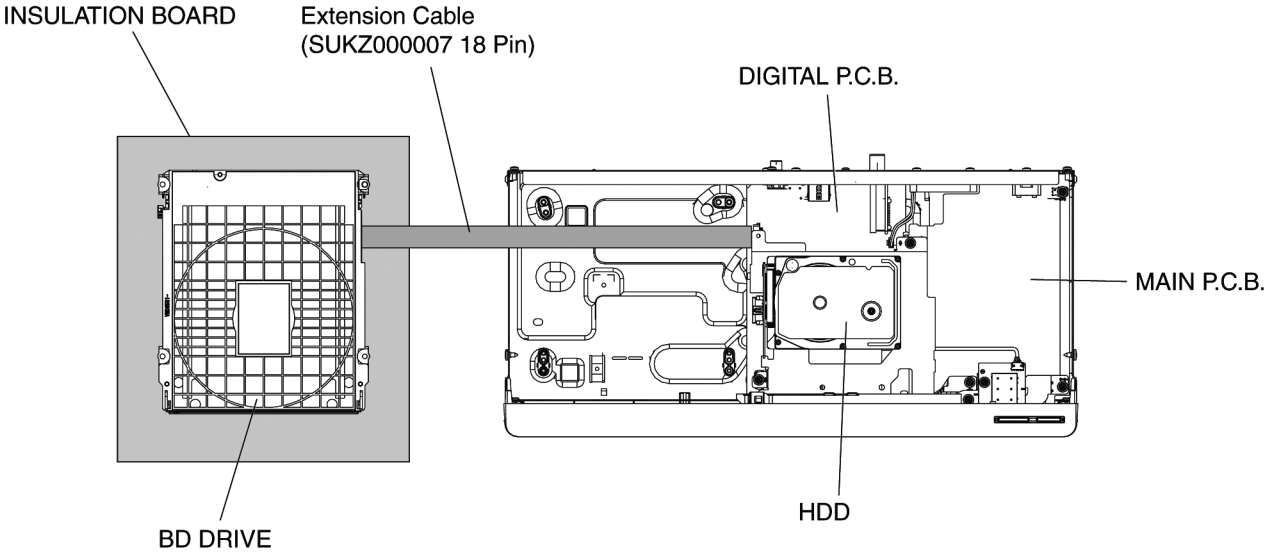
2. BD Drive

Disconnect the connector of DRIVE FFC .

Remove 4 Screws to remove BD Drive.

Connect Extension Cables shown below.
Between BD Drive and Digital P.C.B. (SUKZ000007)18 Pin.

Caution :
1.Red wire should be connected to pin 1.



10.1.3. Checking and Repairing of Main P.C.B.

1.Top Case

Remove 2 Screws on side .

Remove 3 Screws on rear, Remove Top Case.

2. Front Panel Ass'y

Unlock 6 tabs turn and remove Front Panel Ass'y.

3. Wi-Fi Module , HDD and SATA P.C.B.

Disconnect the connector of WLAN Cable.

Remove 2 Screws to remove Wi-Fi Module and WI-FI BRACKET.

Remove 1 Screw to remove Wi-Fi Module.

Remove 3 Screws and disconnect the connector of SATA P.C.B.to remove HDD with HDD bracket.

Remove 3 Screws to remove HDD from HDD Bracket.

Pull up SATA P.C.B..

4. Rear Panel with Fan Motor

Disconnect Fan connector.

Remove 5 Screws (two for HDMI and Tuner)to remove the Rear Panel with Fan.

Remove 2 Screws to remove the Fan.

5. Main P.C.B.

Disconnect 1 connector.

Remove 1 Screw to remove Main P.C.B.

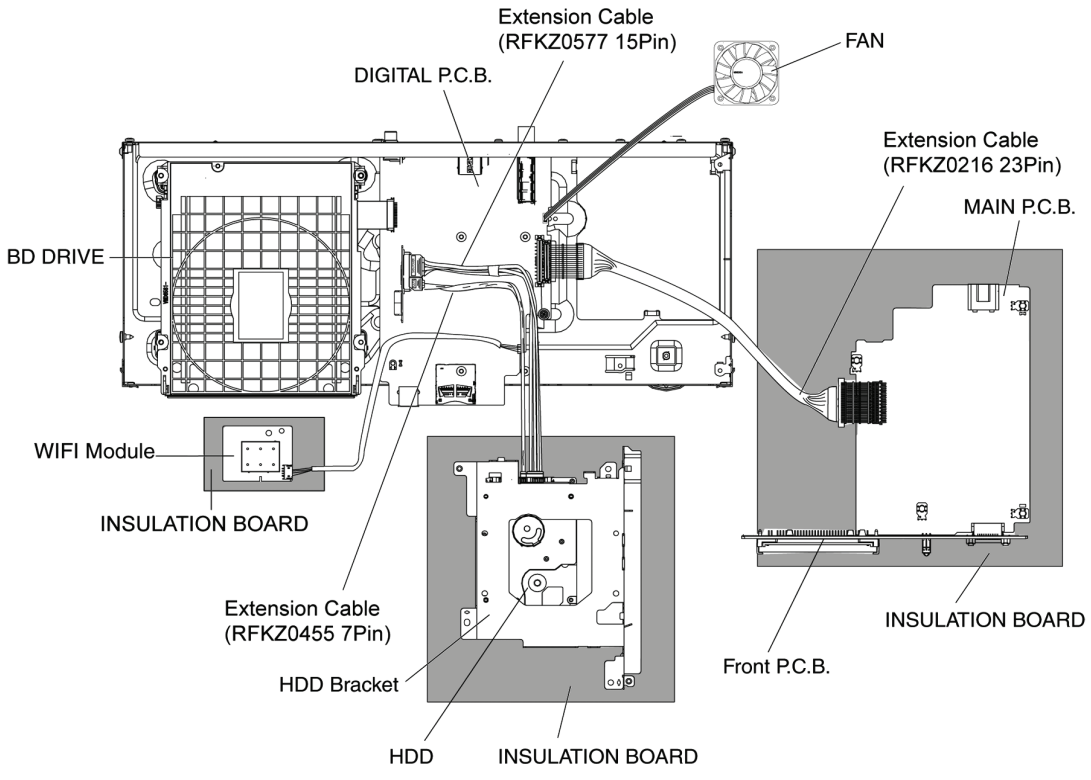
Connect the Wi-Fi Module to the Digital P.C.B. with WLAN Cable.
Connect the Front P.C.B. to the Main P.C.B..
Connect Fan connector to Digital P.C.B..
Connect the SATA P.C.B.to the Digital P.C.B..
Assemble the HDD to the HDD Bracket.

Connect Extension Cables shown below.

Between Main P.C.B. and Digital P.C.B.(RFKZ0216) 23 Pin.
Between HDD and Digital P.C.B. (RFKZ0577) 15 Pin.
Between HDD and Digital P.C.B. (RFKZ0455) 7 Pin.

Caution :

1.Red wire should be connected to pin 1.



10.1.4. Checking and Repairing of Digital P.C.B.

1.Top Case

- Remove 2 Screws on side .
- Remove 3 Screws on rear, Remove Top Case.

2. Front Panel Ass'y

- Unlock 6 tabs turn and Remove Front Panel Ass'y.

3. Wi-Fi Module, HDD and HDD BRIDGE P.C.B.

- Disconnect the connector of WLAN Cable.
- Remove 2 Screws to remove Wi-Fi Module and WI-FI BRACKET.
- Remove 1 Screw to remove Wi-Fi Module.
- Remove 3 Screws and disconnect the connector of SATA P.C.B.to remove HDD with HDD bracket.
- Remove 3 Screws to remove HDD from HDD Bracket.
- Pull up SATA P.C.B..

4. Rear Panel and Fan Motor

- Disconnect Fan connector
- Remove 5 Screws (two for HDMI and Tuner)to remove the Rear Panel with Fan.
- Remove 2 Screws to remove the Fan.

5. Tuner P.C.B.

- Pull up Tuner P.C.B..

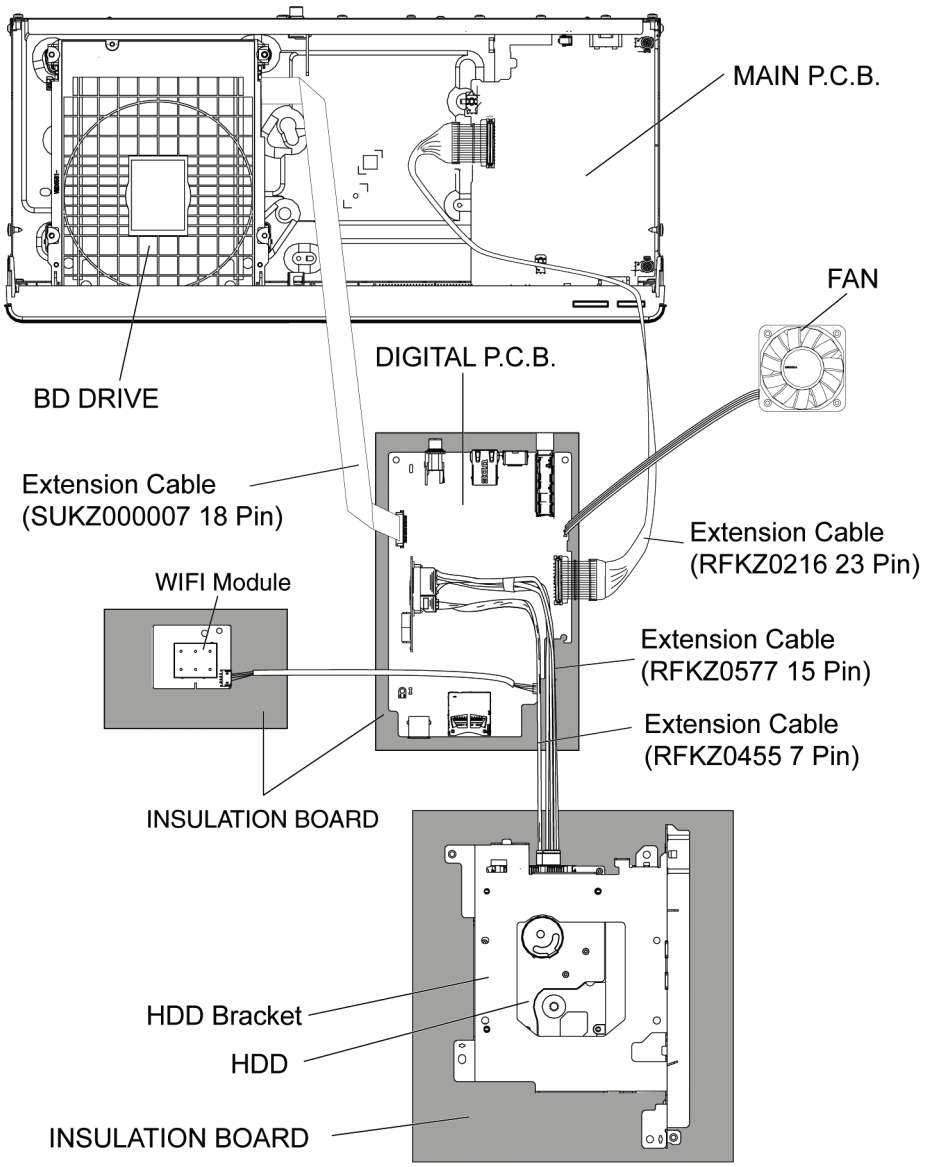
6. Digital P.C.B.

- Disconnect 1 connector.
- Remove 3 Screws to remove Digital P.C.B..
- Connect the Wi-Fi Module to the Digital P.C.B. with WLAN Cable.
  Assemble Front Panel.
  Connect Fan connector to Digital P.C.B.
  Connect the SATA P.C.B.to the Digital P.C.B..
  Connect the Tuner P.C.B.to the Digital P.C.B..
  Assemble the HDD to the HDD Bracket.

Connect Extension Cables shown below.

Between Digital P.C.B. and Main P.C.B.(RFKZ0216) 23 Pin.
Between Digital P.C.B. and HDD (RFKZ0577) 15 Pin.
Between Digital P.C.B. and HDD (RFKZ0455) 7 Pin.
Between Digital P.C.B. and BD Drive (SUKZ000007)18 Pin.

Caution :
1.Red wire should be connected to pin 1.



10.2. Caution for Replacing Parts

10.2.1. Items that should be done after replacing parts

√ :Necessary — :Unnecessary

Items that Should be done / Replacing Parts	Main Firm update	HDD Format
Digital P.C.B.	√	—
Main P.C.B. (IC6811:EEPROM)	—	√
BD Drive	√	—
HDD	—	√

10.2.2. Notice after replacing Digital P.C.B. or BD Drive

Formatting the HDD is unnecessary after replacing Digital P.C.B. or BD Drive.
[TM AV1] is displayed, once power OFF, and power ON again.

10.3. Standard Inspection Specifications after Making Repairs

After making repairs, we recommend performing the following inspection, to check normal operation.

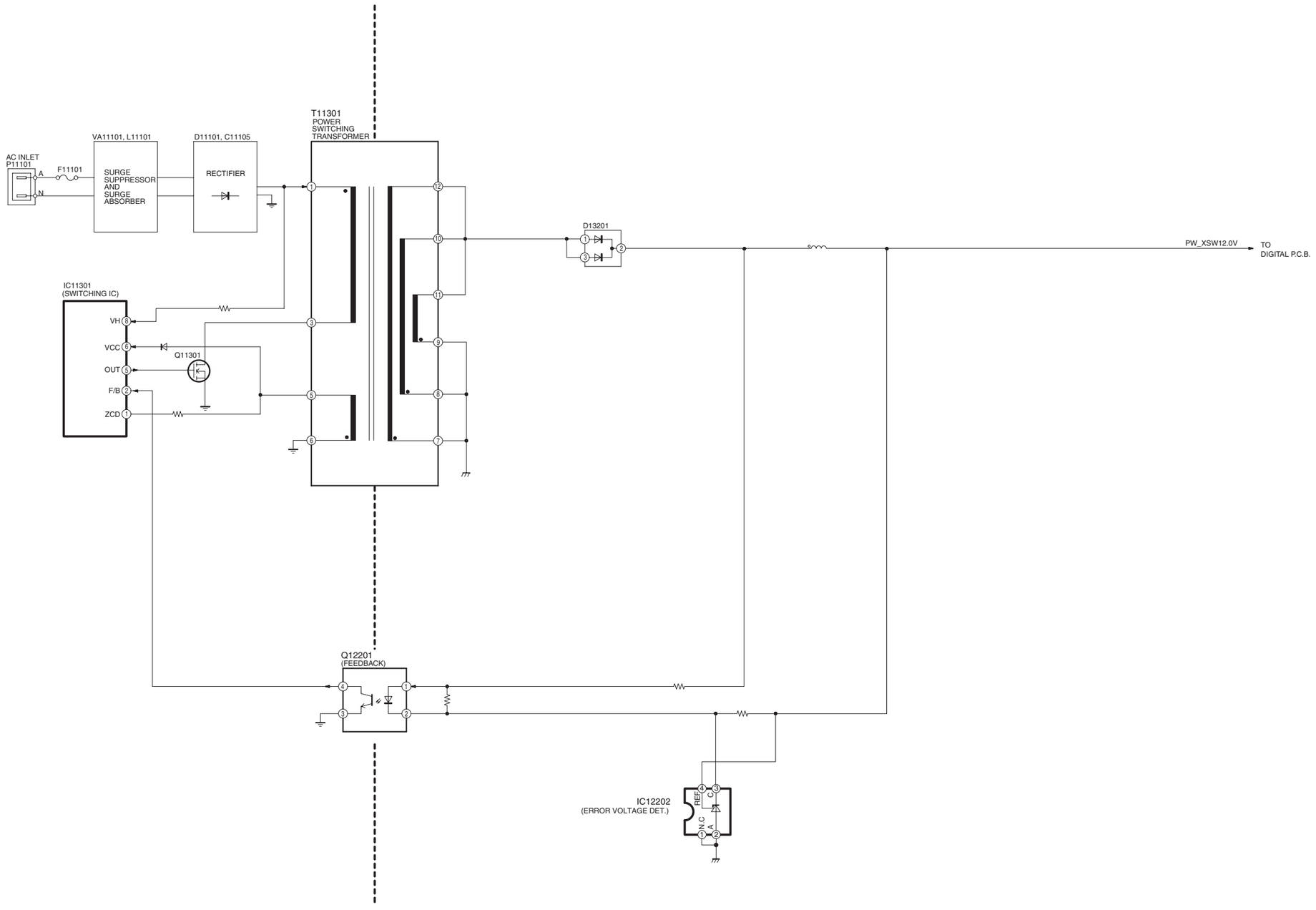
No.	Procedure	Item to Check
1	Turn on the power, and confirm items pointed out.	Items pointed out should reappear.
2	Insert RAM disc.	The Panasonic RAM disc should be recognized.
3	Enter the EE (TU IN / AV IN - AV OUT) mode.	No abnormality should be seen in the picture, sound or operation.
4	Model with the HDD: Perform self-recording and playback for one minute using the HDD.	No abnormality should be seen in the picture, sound or operation.
5	Perform copy a program to disc and playback for one minute using the BD-RE (V2.0) and RAM discs.	No abnormality should be seen in the picture, sound or operation. *Panasonic BD-RE (V2.0) and DVD-RAM discs should be used when copying and playback.
6	If a problem is caused by a VCD, DVD-R, DVD-Video, Audio-CD, or MP3, playback the test disc.	No abnormality should be seen in the picture, sound or operation.
7	Models with SD Card Slot or DV Input Jack or USB Input Jack: In case of that the trouble is caused by SD card and/or DV terminal and / or USB terminal.	Models with SD Card or DV Input Jack; 1) SD Card: Check to be able to display and copy the picture. 2) DV terminal: Check to be able to record from DVC. 3) USB terminal: Check to be able to display and copy the picture.
8	After checking and making repairs, upgrade the firmware to the latest version.	Do not turn the power off until writing is complete (The tray automatically opens when writing is complete.). "NoUPDATE" message indicates that updating the version is not necessary since the version is the latest or the same one.
9	Transfer [9][9] in the service mode setting, and initialize the service settings (return various settings and error information to their default values. The laser time is not included in this initialization).	Make sure that [CLR] appears in the LCD display. After checking it, turn the power off.

Use the following checklist to establish the judgement criteria for the picture and sound.

Item	Contents	Check	Item	Contents	Check
Picture	Block noise		Sound	Distorted sound	
	Crosscut noise			Noise (static, background noise, etc.)	
	Dot noise			The sound level is too low.	
	Picture disruption			The sound level is too high.	
	Not bright enough			The sound level changes.	
	Too bright				
	Flickering color				
	Color fading				

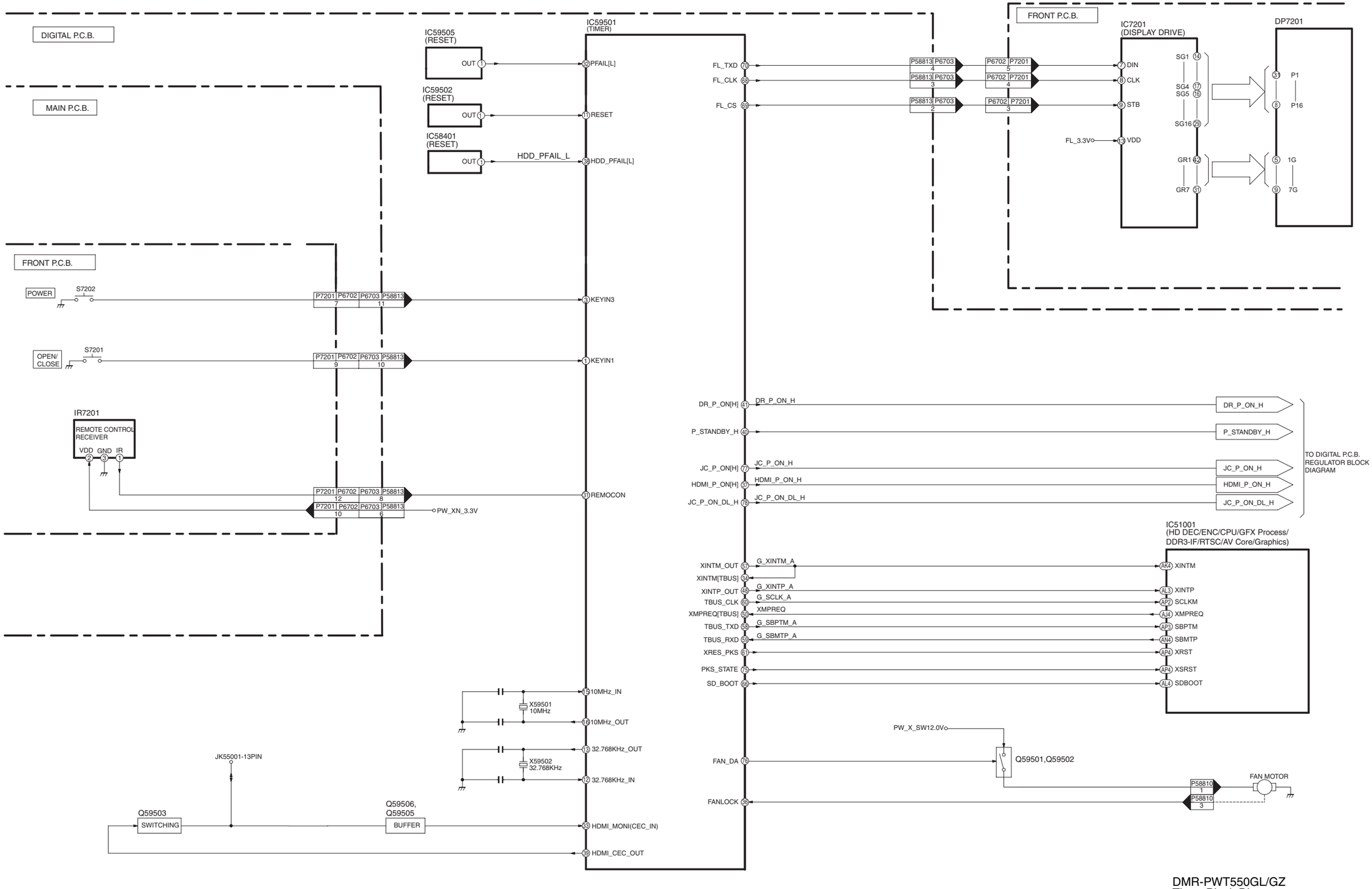
11 Block Diagram

11.1. Power Supply Block Diagram



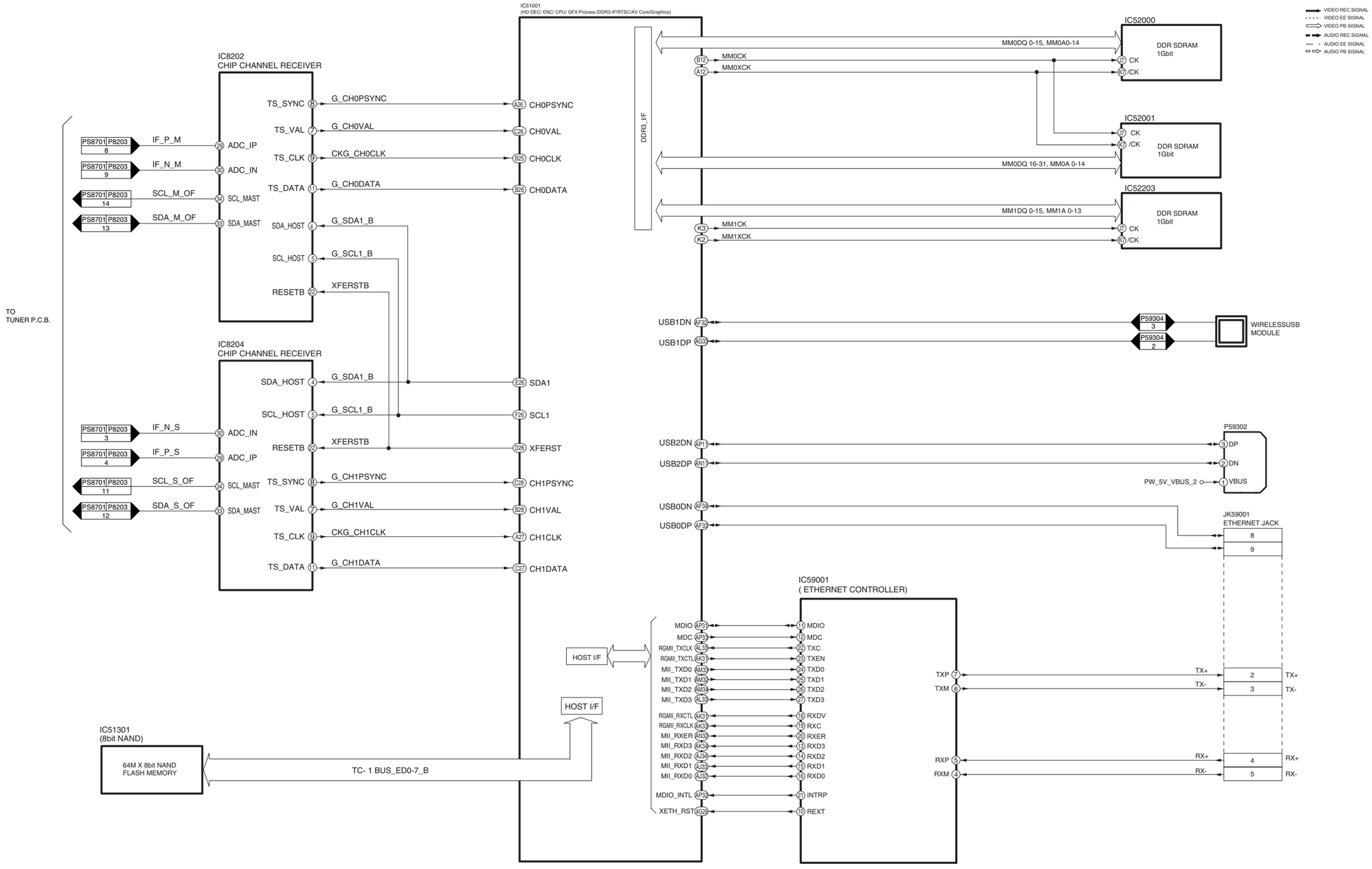
DMR-PWT550GL/GZ
Power Supply Block Diagram

11.2. Analog Timer Block Diagram



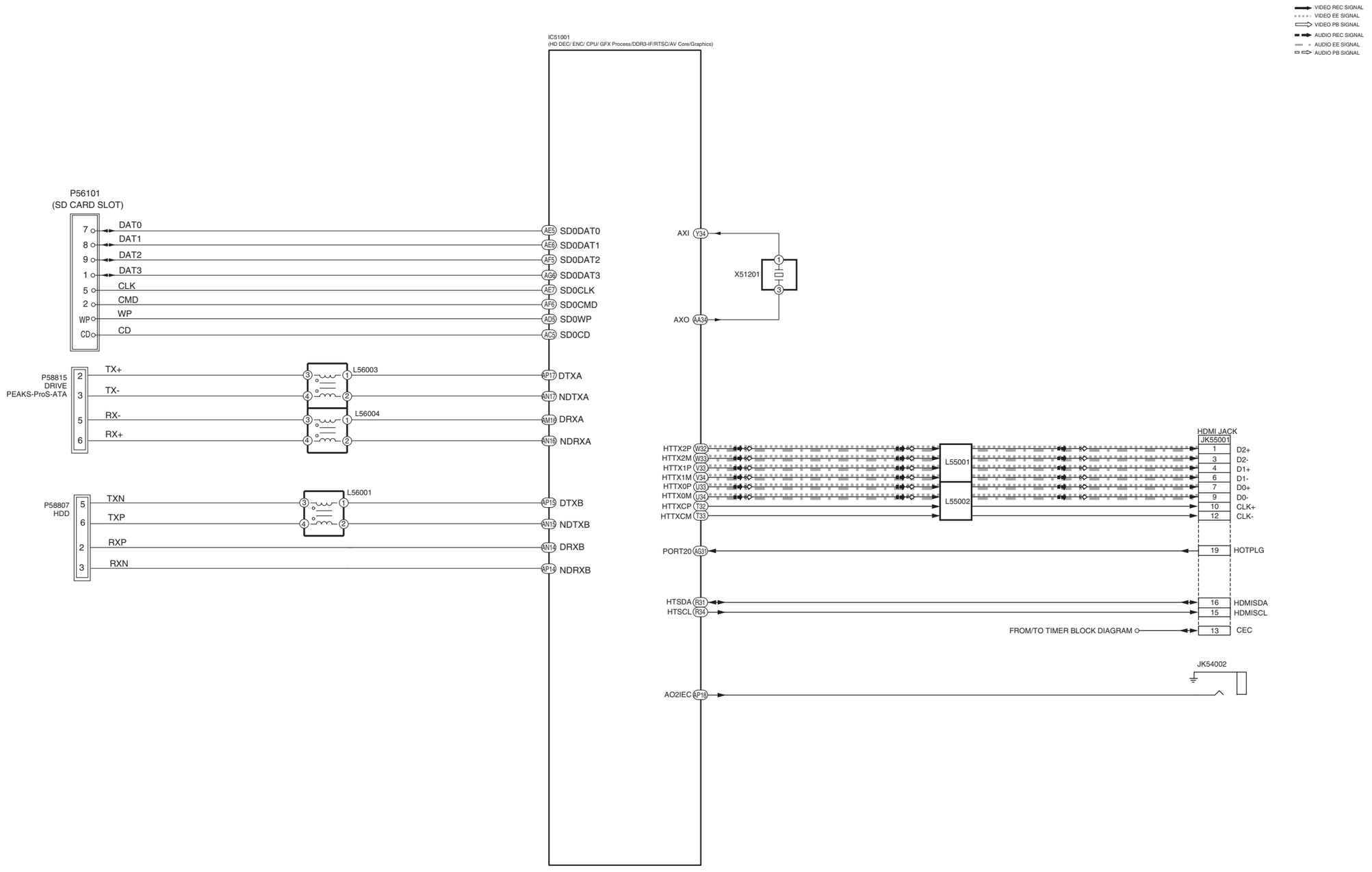
DMR-PWT550GL/GZ
Timer Block Diagram

11.3. Digital P.C.B. Block Diagram (1/2)



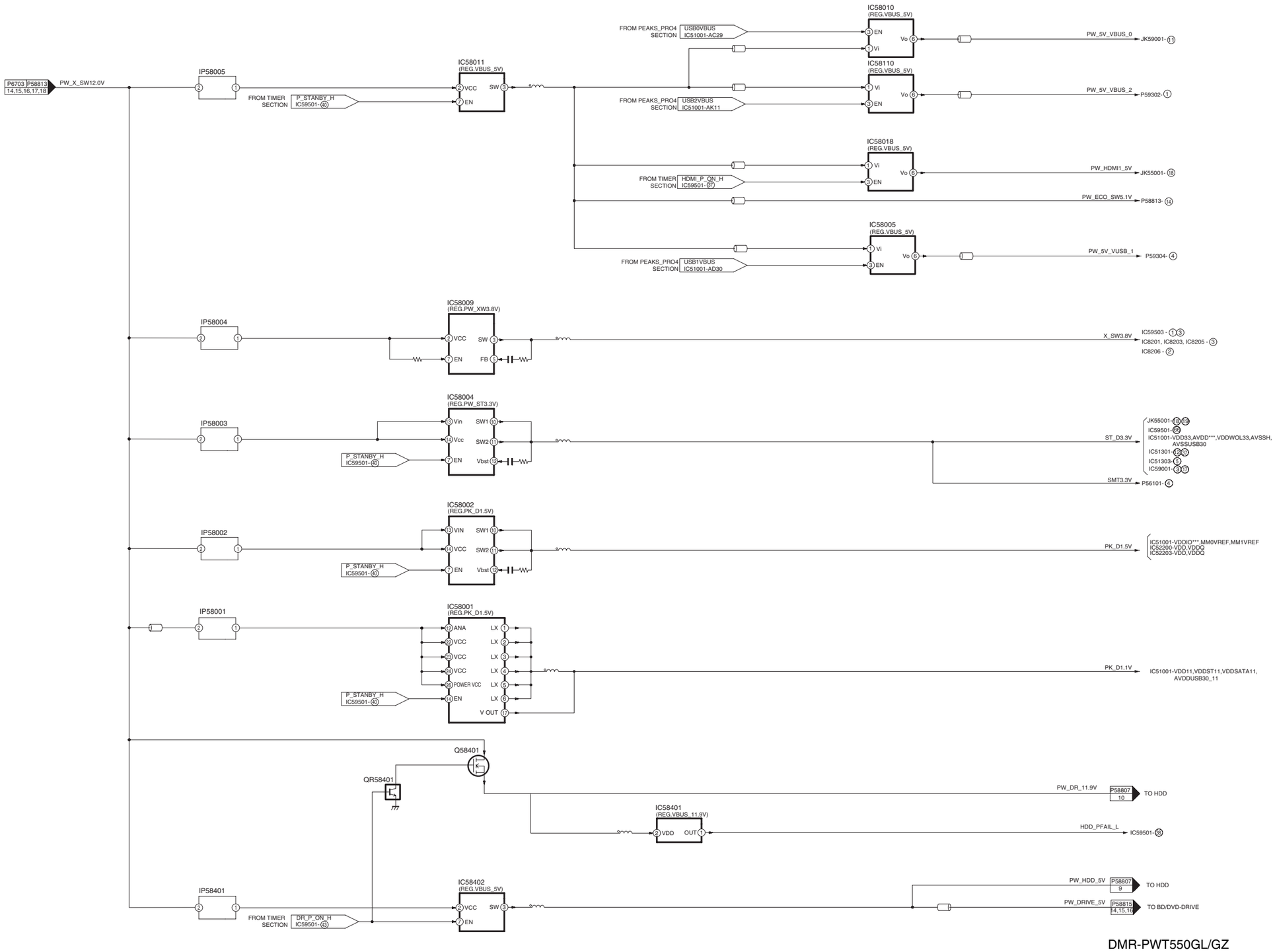
DMR-PWT550GL/GZ
DIGITAL BLOCK DIAGRAM(1/2)

11.4. Digital P.C.B. Block Diagram (2/2)



DMR-PWT550GL/GZ
DIGITAL BLOCK DIAGRAM(2/2)

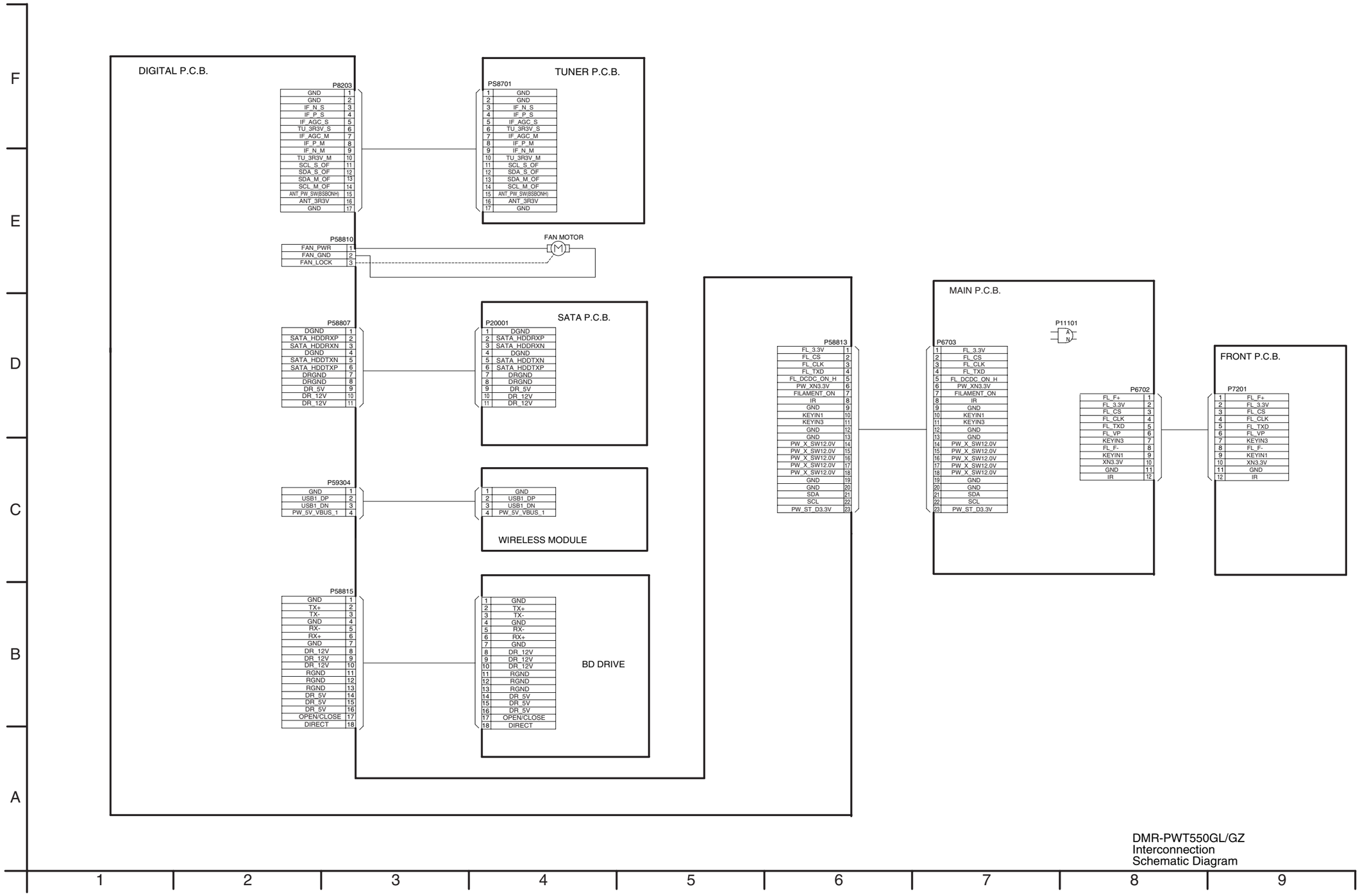
11.5. Digital P.C.B. Regulator Block Diagram



DMR-PWT550GL/GZ
Digital P.C.B. Regulator Block Diagram

12 Wiring Connection Diagram

12.1. Interconnection Schematic Diagram



DMR-PWT550GL/GZ
Interconnection
Schematic Diagram

IMPORTANT SAFETY NOTICE:

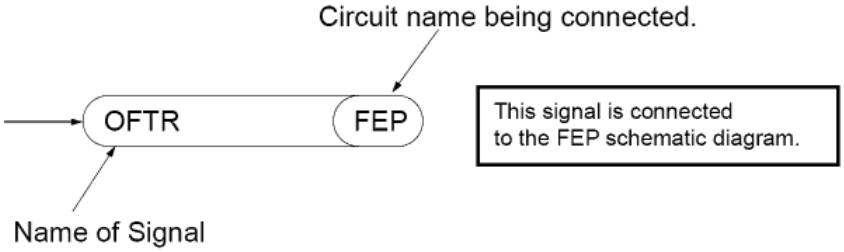
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.

1. Although reference number of the parts is indicated on the P.C.B. drawing and/or schematic diagrams, it is NOT mounted on the P.C.B. when it is displayed with "$" mark.

2. It is only the "Test Round" and no terminal (Pin) is available on the P.C.B. when the TP (Test Point) indicated as "●" mark.

3. Use the parts number indicated on the Replacement Parts List.

4. Indication on the Schematic diagrams:



5. It might be taking time for display and/or access of the Schematic Diagrams & P.C.B. having the heavy data volume.

6. The circuit is defined by HOT and COLD indications in the schematic diagram. Please take note to prevent from electric shock.

Model No. : DMR-PWT550GL/GZ PART LIST NOTICE

Notes:

*Important safety notice:

Components identified by ⚠ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of
fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

*Warning: This product uses a laser diode. Refer to caution statements.

*Capacity values are in microfarads (μF) unless specified otherwise, P=Pico-farads (pF), F=Farads (F).

*Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM).

*The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

*"(En)" marks in Remarks indicate languages of instruction manuals. [(En): English]

*All parts are supplied by CHPAVC.

E.S.D. standards for Electrostatically Sensitive Devices, refer to "PREVENTION OF ELECTROSTATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section.

Notes:

*Parts indicated with "ADJ" in the Remarks column are necessary to Input Engineering Adjusted Value.

INITIAL/LOGO		ABBREVIATIONS
A	A0~UP	ADDRESS
	ACLK	AUDIO CLOCK
	AD0~UP	ADDRESS BUS
	ADATA	AUDIO PES PACKET DATA
	ALE	ADDRESS LATCH ENABLE
	AMUTE	AUDIO MUTE
	AREQ	AUDIO PES PACKET REQUEST
	ARF	AUDIO RF
	ASI	SERVO AMP INVERTED INPUT
	ASO	SERVO AMP OUTPUT
	ASYNC	AUDIO WORD DISTINCTION SYNC
B	BCK	BIT CLOCK (PCM)
	BCKIN	BIT CLOCK INPUT
	BDO	BLACK DROP OUT
	BLKCK	SUB CODE BLOCK CLOCK
	BOTTOM	CAP. FOR BOTTOM HOLD
	BYP	BYPATH
	BYTCK	BYTE CLOCK
C	CAV	CONSTANT ANGULAR VELOCITY
	CBDO	CAP. BLACK DROP OUT
	CD	COMPACT DISC
	CDSCK	CD SERIAL DATA CLOCK
	CDSRDATA	CD SERIAL DATA
	CDRF	CD RF (EFM) SIGNAL
	CDV	COMPACT DISC-VIDEO
	CHNDATA	CHANNEL DATA
	CKSL	SYSTEM CLOCK SELECT
	CLV	CONSTANT LINEAR VELOCITY
	COFTR	CAP. OFF TRACK
	CPA	CPU ADDRESS
	CPCS	CPU CHIP SELECT
	CPDT	CPU DATA
	CPUADR	CPU ADDRESS LATCH
	CPUADT	CPU ADDRESS DATA BUS
	CPUIRQ	CPU INTERRUPT REQUEST
	CPRD	CPU READ ENABLE
	CPWR	CPU WRITE ENABLE
	CS	CHIP SELECT
	CSYNCIN	COMPOSITE SYNC IN
	CSYNCOUT	COMPOSITE SYNC OUT
D	DACCK	D/A CONVERTER CLOCK
	DEEMP	DEEMPHASIS BIT ON/OFF
	DEMPH	DEEMPHASIS SWITCHING
	DIG0~UP	FL DIGIT OUTPUT
	DIN	DATA INPUT
	DMSRCK	DM SERIAL DATA READ CLOCK
	DMUTE	DIGITAL MUTE CONTROL
	DO	DROP OUT
	DOUT0~UP	DATA OUTPUT
	DRF	DATA SLICE RF (BIAS)
	DRPOUT	DROP OUT SIGNAL
	DREQ	DATA REQUEST
	DRESP	DATA RESPONSE
	DSC	DIGITAL SERVO CONTROLLER
	DSLF	DATA SLICE LOOP FILTER
	DVD	DIGITAL VIDEO DISC

INITIAL/LOGO		ABBREVIATIONS
E	EC	ERROR TORQUE CONTROL
	ECR	ERROR TORQUE CONTROL REFERENCE
	ENCSEL	ENCODER SELECT
	ETMCLK	EXTERNAL M CLOCK (81MHz/40.5MHz)
	ETSCLK	EXTERNAL S CLOCK (54MHz)
F	FBAL	FOCUS BALANCE
	FCLK	FRAME CLOCK
	FE	FOCUS ERROR
	FFI	FOCUS ERROR AMP INVERTED INPUT
	FEO	FOCUS ERROR AMP OUTPUT
	FG	FREQUENCY GENERATOR
	FSC	FREQUENCY SUB CARRIER
	FSCK	FS (384 OVER SAMPLING) CLOCK
G	GND	COMMON GROUNDING (EARTH)
H	HA0~UP	HOST ADDRESS
	HD0~UP	HOST DATA
	HINT	HOST INTERRUPT
	HRXW	HOST READ/WRITE

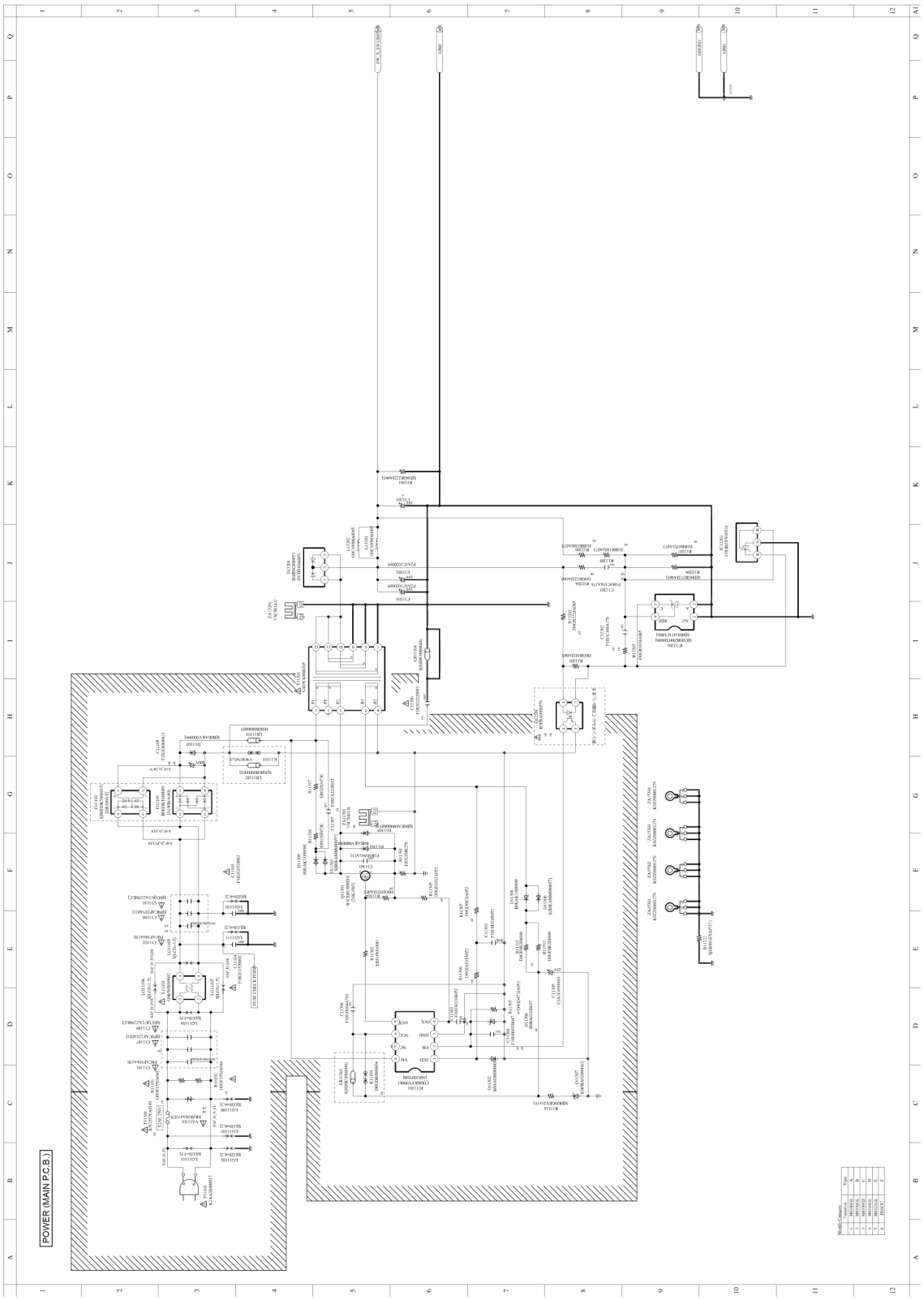
INITIAL/LOGO		ABBREVIATIONS
I	IECOUT	IEC958FORMATDATAOUTPUT
	IPFRAG	INTERPOLATIONFLAG
	IREF	I(CURRENT)REFERENCE
	ISEL	INTERFACEMODESELECT
L	LDON	LASERDIODECONTROL
	LPC	LASERPOWERCONTROL
	LRCK	LCH/RCHDISTINCTIONCLOCK
M	MA0~UP	MEMORYADDRESS
	MCK	MEMORYCLOCK
	MCKI	MEMORYCLOCKINPUT
	MCLK	MEMORYSERIALCOMMANDCLOCK
	MDATA	MEMORYSERIALCOMMANDDATA
	MDQ0~UP	MEMORYDATAINPUT/OUTPUT
	MDQM	MEMORYDATAI/OMASK
	MLD	MEMORYSERIALCOMMANDLOAD
	MPEG	MOVINGPICTUREEXPERTSGROUP
O	ODC	OPTICALDISCCONTROLLER
	OFTR	OFFTRACKING
	OSCI	OSCILLATORINPUT
	OSCO	OSCILLATOROUTPUT
	OSD	ONSCREENDISPLAY
P	P1~UP	PORT
	PCD	CDTRACKINGPHASEDIFFERENCE
	PCK	PLLCLOCK
	PDVD	DVDTRACKINGPHASEDIFFERENCE
	PEAK	CAP.FORPEAKHOLD
	PLLCLK	CHANNELPLLCLOCK
	PLLOK	PLLLOCK
	PWMCTL	PWMOUTPUTCONTROL
	PWMDA	PULSEWAVEMOTORDRIVEA
	PWMOA,B	PULSEWAVEMOTOROUTA,B

INITIAL/LOGO		ABBREVIATIONS
R	RE	READENABLE
	RFENV	RFENVELOPE
	RFO	RFPHASEDIFFERENCEOUTPUT
	RS	(CD-ROM)REGISTERSELECT
	RSEL	RFPOLARITYSELECT
	RST	RESET
	RSV	RESERVE
S	SBI0,1	SERIALDATAINPUT
	SBO0	SERIALDATAOUTPUT
	SBT0,1	SERIALCLOCK
	SCK	SERIALDATACLOCK
	SCKR	AUDIOSERIALCLOCKRECEIVER
	SCL	SERIALCLOCK
	SCLK	SERIALCLOCK
	SDA	SERIALDATA
	SEG0~UP	FLSEGMENTOUTPUT
	SELCLK	SELECTCLOCK
	SEN	SERIALPORTENABLE
	SIN1,2	SERIALDATAIN
	SOUT1,2	SERIALDATAOUT
	SPDI	SERIALPORTDATAINPUT
	SPDO	SERIALPORTDATAOUTPUT
	SPEN	SERIALPORTR/WENABLE
	SPRCLK	SERIALPORTREADCLOCK
	SPWCLK	SERIALPORTWRITECLOCK
	SQCK	SUBCODEQCLOCK
	SQCX	SUBCODEQDATAREADCLOCK
	SRDATA	SERIALDATA
	SRMADR	SRAMADDRESSBUS
	SRMDT0~7	SRAMDATABUS0~7
	SS	START/STOP
	STAT	STATUS
	STCLK	STREAMDATACLOCK
	STD0~UP	STREAMDATA
	STENABLE	STREAMDATAINPUTENABLE
	STSEL	STREAMDATAPOLARITYSELECT
	STVALID	STREAMDATAVALIDITY
	SUBC	SUBCODESERIAL
	SBCK	SUBCODECLOCK
	SUBQ	SUBCODEQDATA
	SYSCLK	SYSTEMCLOCK

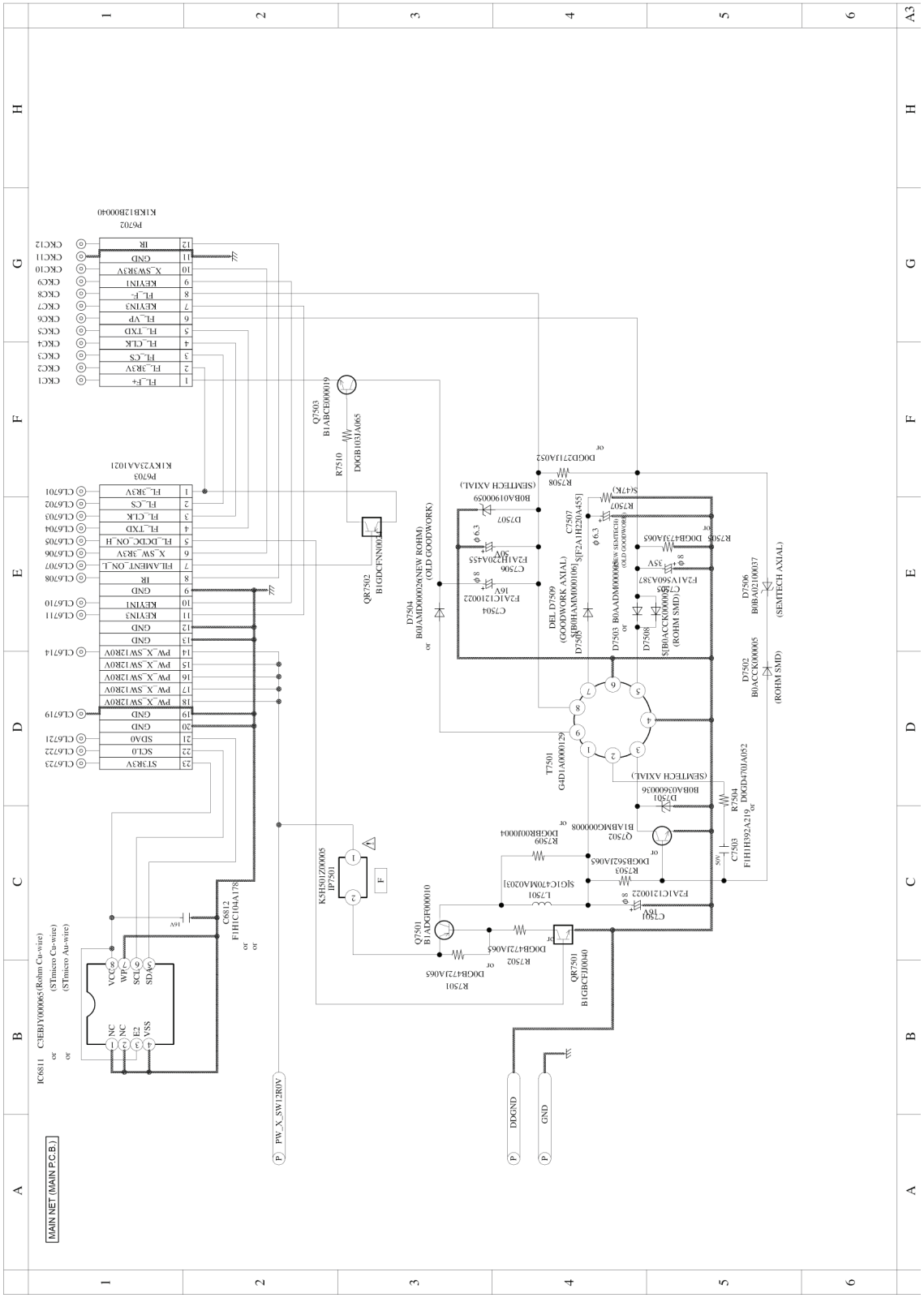
INITIAL/LOGO		ABBREVIATIONS
T	TE	TRACKING ERROR
	TIBAL	BALANCE CONTROL
	TID	BALANCE OUTPUT 1
	TIN	BALANCE INPUT
	TIP	BALANCE INPUT
	TIS	BALANCE OUTPUT 2
	TPSN	OP AMP INPUT
	TPSO	OP AMP OUTPUT
	TPSP	OP AMP INVERTED INPUT
	TRCRS	TRACK CROSS SIGNAL
	TRON	TRACKING ON
	TRSON	TRAVERSE SERVO ON

INITIAL/LOGO		ABBREVIATIONS
V	VBLANK	V BLANKING
	VCC	COLLECTOR POWER SUPPLY VOLTAGE
	VCDCONT	VIDEO CD CONTROL (TRACKING BALANCE)
	VDD	DRAIN POWER SUPPLY VOLTAGE
	VFB	VIDEO FEED BACK
	VREF	VOLTAGE REFERENCE
	VSS	SOURCE POWER SUPPLY VOLTAGE
W	WAIT	BUS CYCLE WAIT
	WDCK	WORD CLOCK
	WEH	WRITE ENABLE HIGH
	WSR	WORD SELECT RECEIVER
X	X	X´TAL
	XALE	X ADDRESS LATCH ENABLE
	XAREQ	X AUDIO DATA REQUEST
	XCDROM	X CD ROM CHIP SELECT
	XCS	X CHIP SELECT
	XCSYNC	X COMPOSITE SYNC
	XDS	X DATA STROBE
	XHSYNCO	X HORIZONTAL SYNC OUTPUT
	XHINT	XH INTERRUPT REQUEST
	XI	X´TAL OSCILLATOR INPUT
	XINT	X INTERRUPT
	XMW	X MEMORY WRITE ENABLE
	XO	X´TAL OSCILLATOR OUTPUT
	XRE	X READ ENABLE
	XSRMCE	X SRAM CHIP ENABLE
	XSRMOE	X SRAM OUTPUT ENABLE
	XSRMWE	X SRAM WRITE ENABLE
	XVCS	X V-DEC CHIP SELECT
	XVDS	X V-DEC CONTROL BUS STROBE
	XVSYNCO	X VERTICAL SYNC OUTPUT

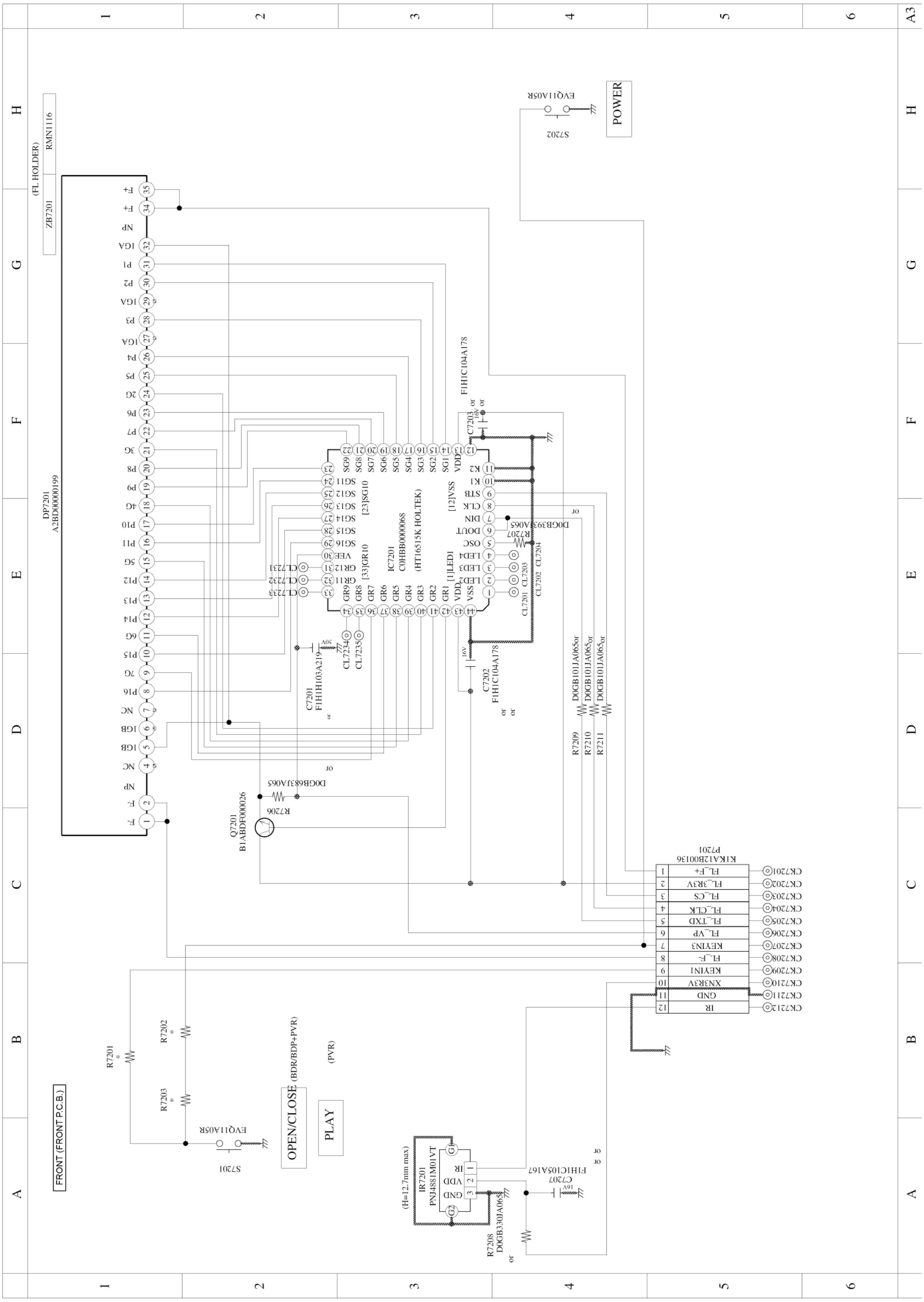
Model No. : DMR-PWT550GL/GZ　POWER SECTION(POWER P.C.B.)



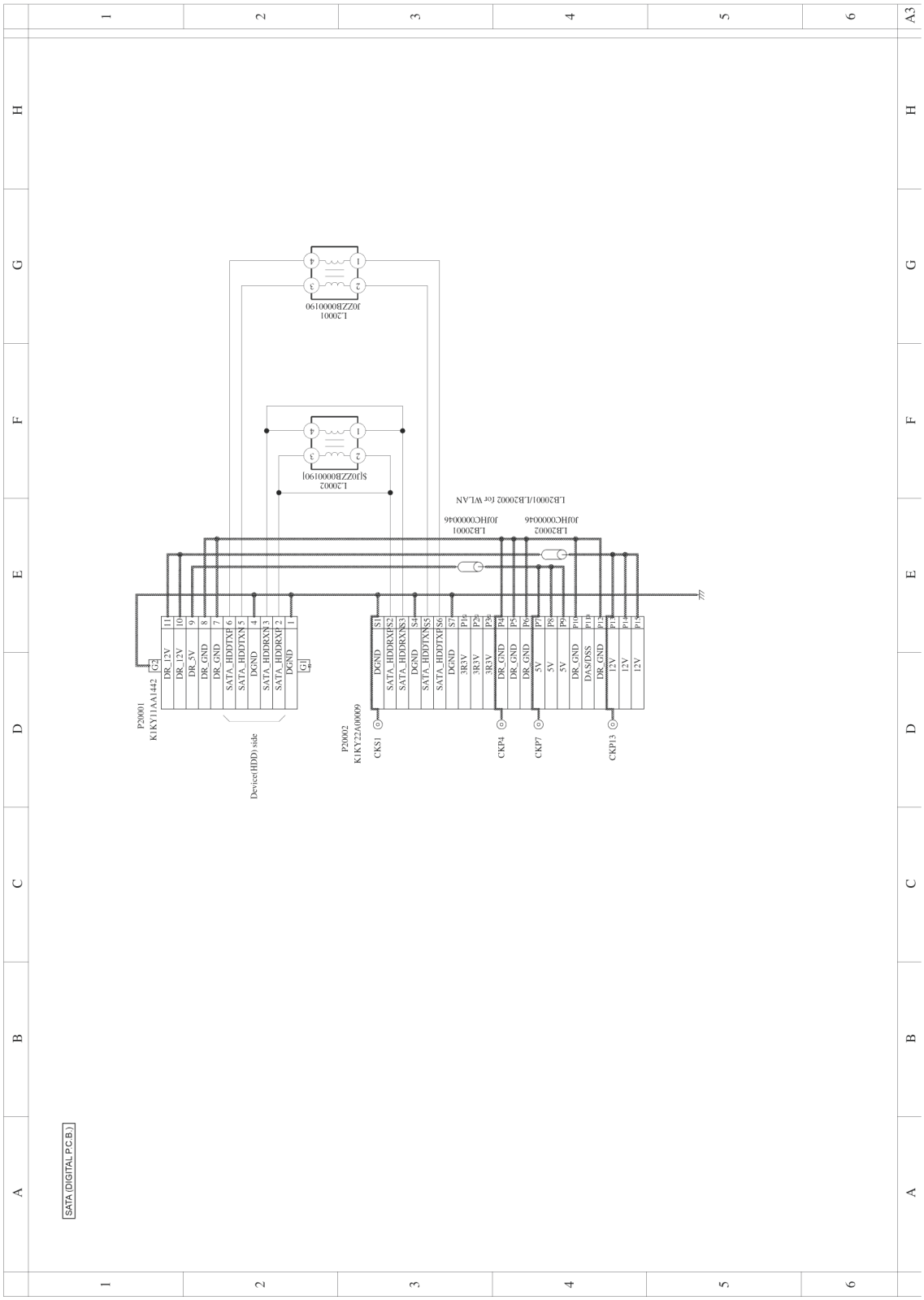
Model No. : DMR-PWT550GL/GZ　MAIN NET SECTION(MAIN P.C.B.)



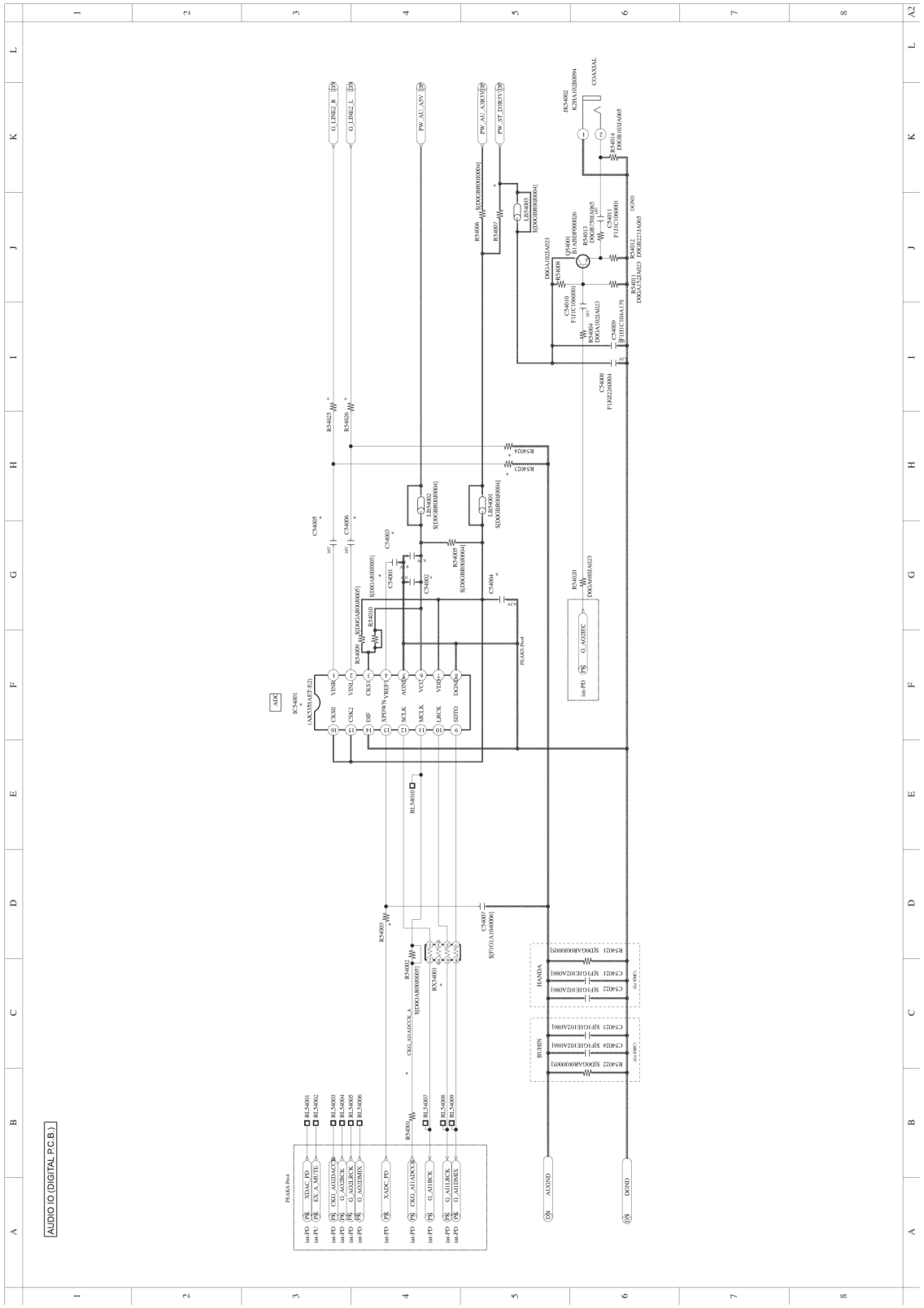
Model No. : DMR-PWT550GL/GZ   FRONT SW SECTION(MAIN P.C.B.)



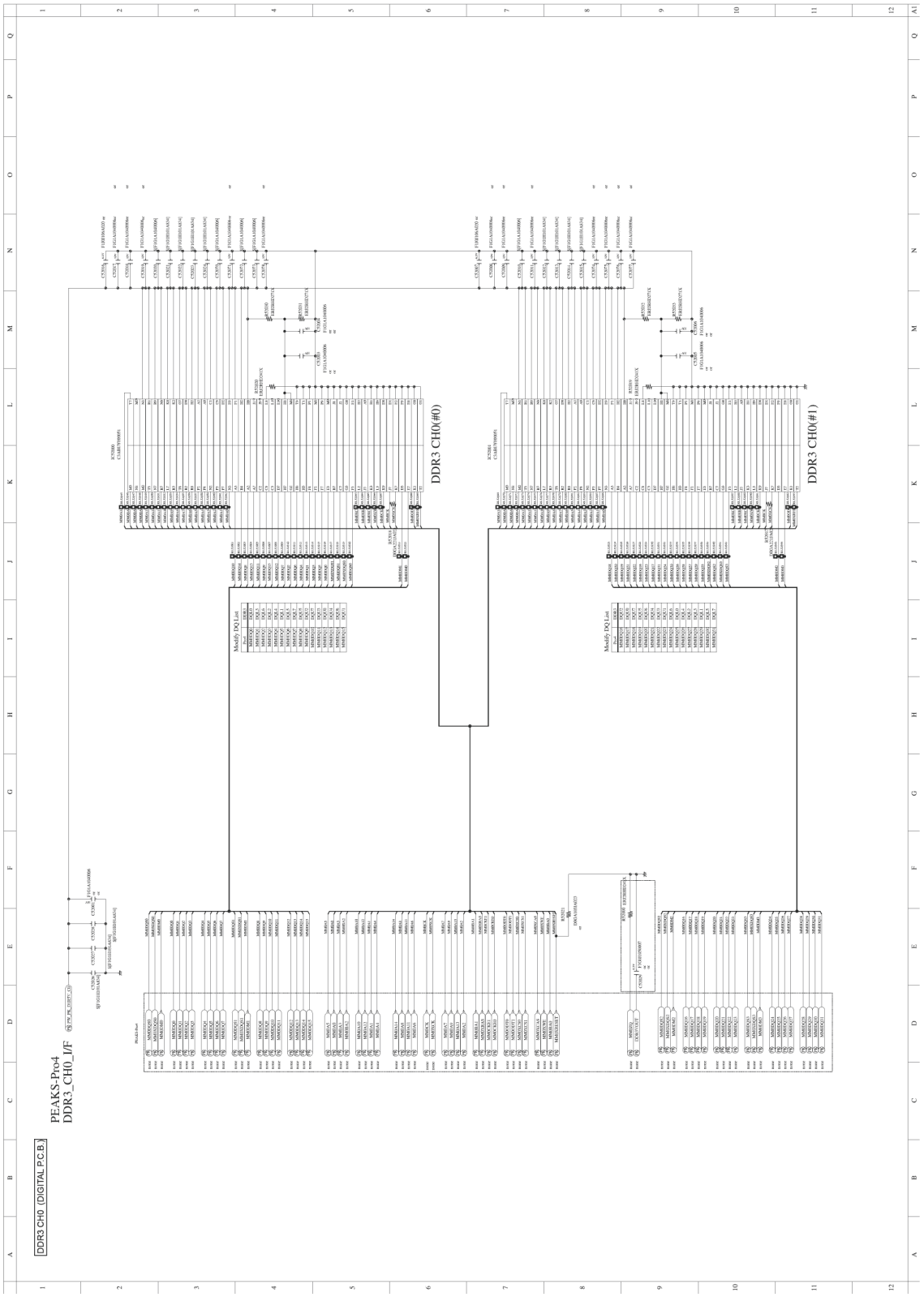
Model No. : DMR-PWT550GL/GZ SATA(DIGITAL P.C.B.)



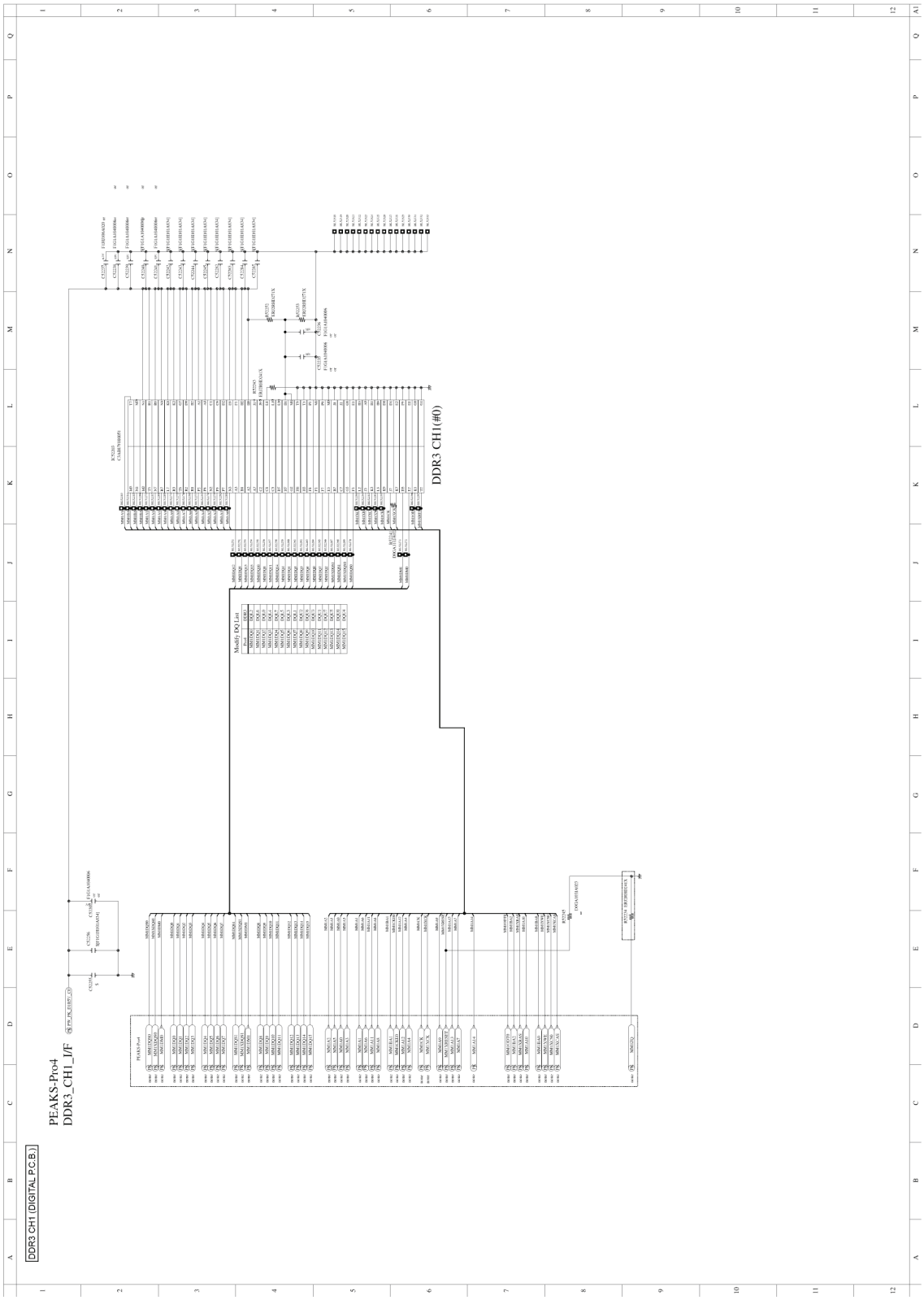
Model No. : DMR-PWT550GL/GZ AUDIO IO SECTION(DIGITAL P.C.B.)



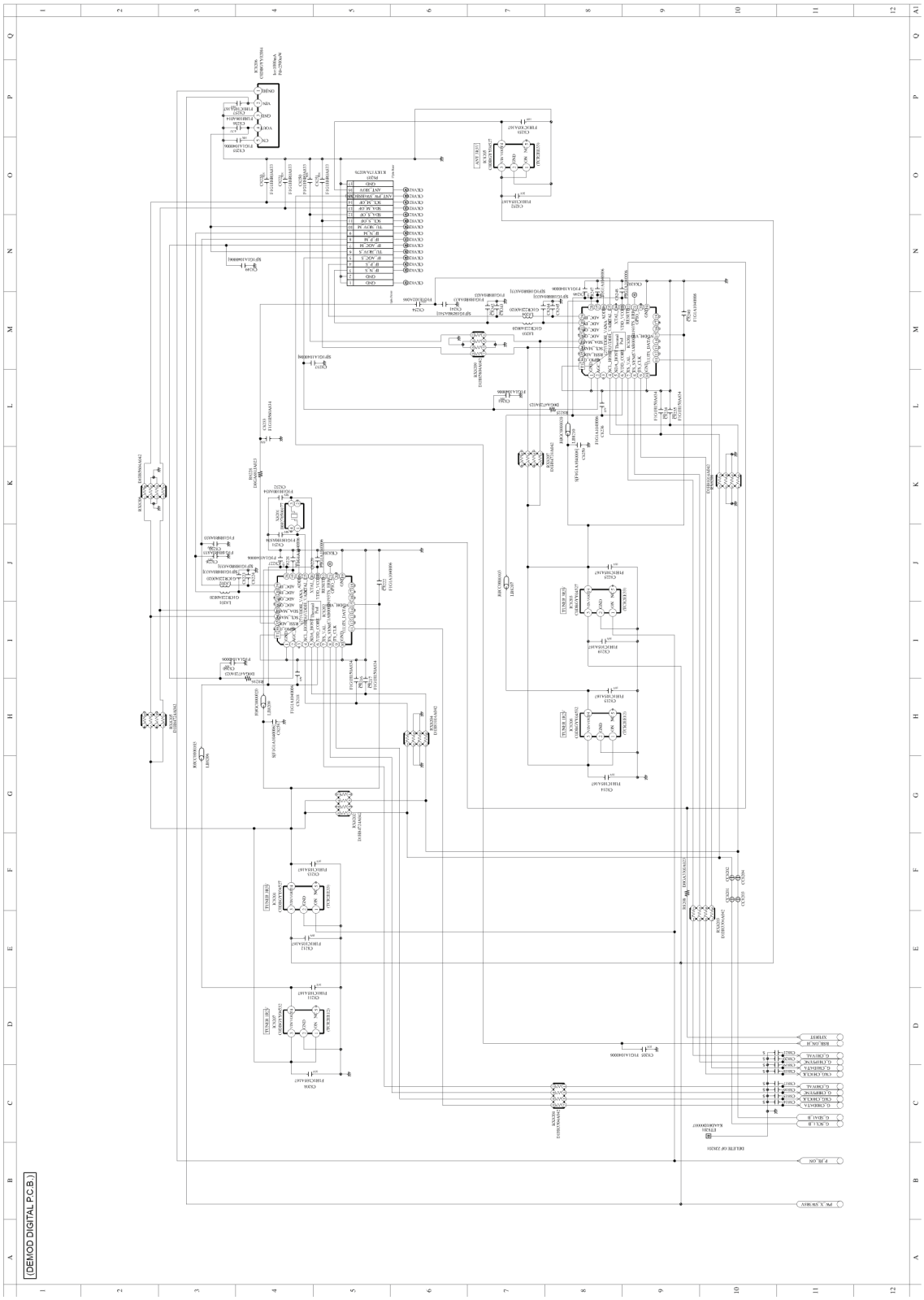
Model No. : DMR-PWT550GL/GZ DDR3 CH 0 SECTION(DIGITAL P.C.B.)



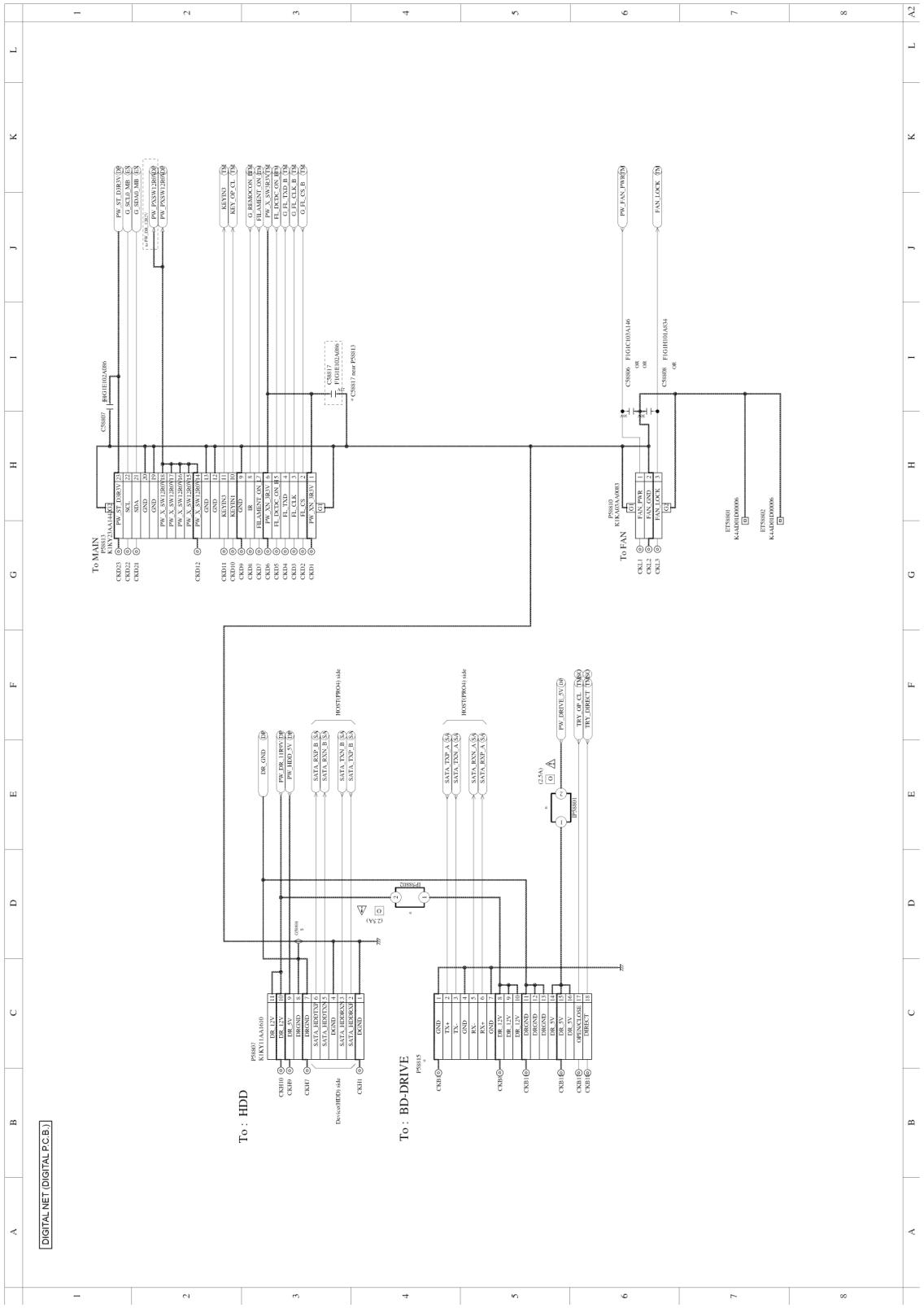
Model No. : DMR-PWT550GL/GZ DDR3 CH 1 SECTION(DIGITAL P.C.B.)



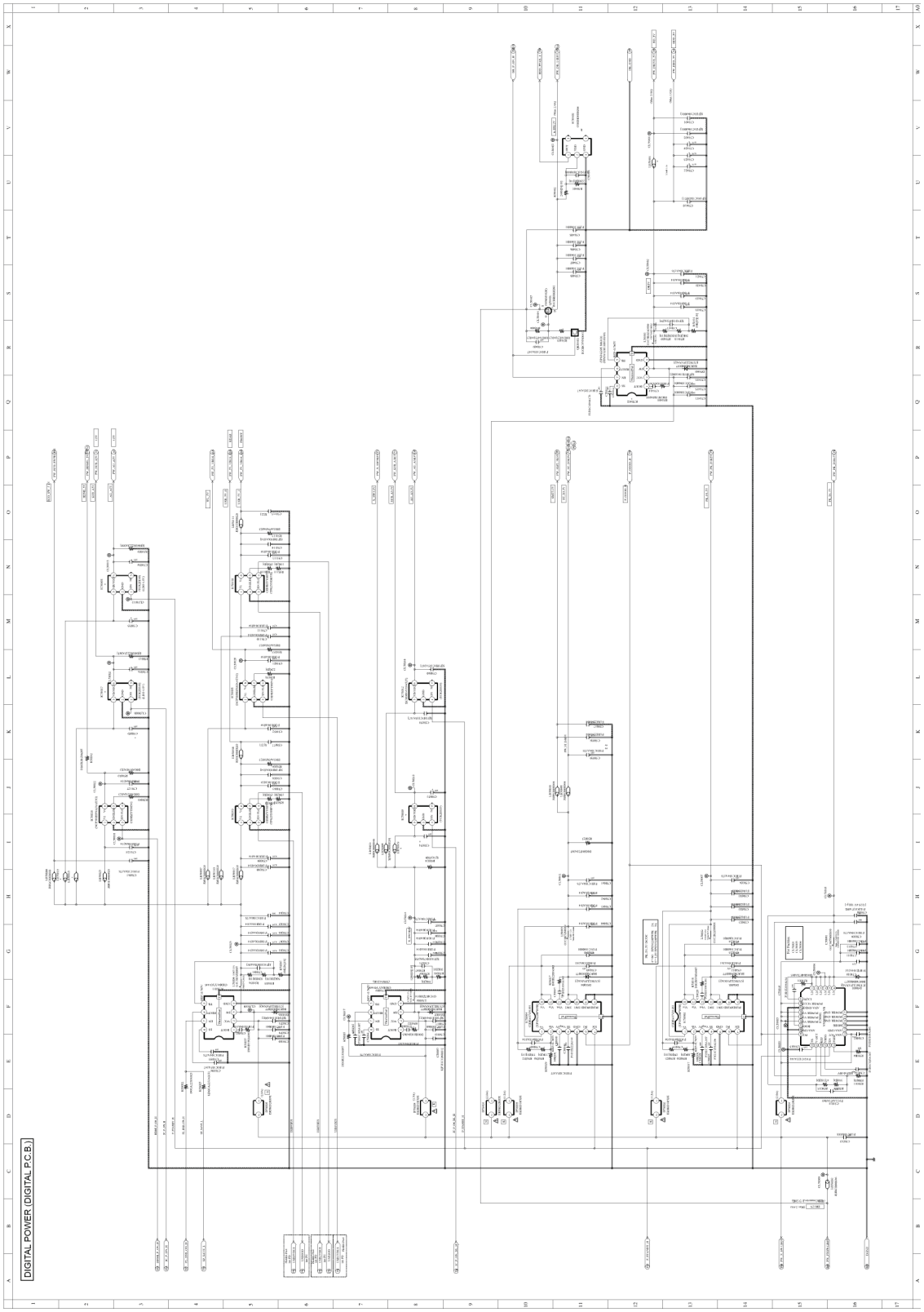
Model No. : DMR-PWT550GL/GZ　DEMOD SECTION(DEMOD P.C.B.)



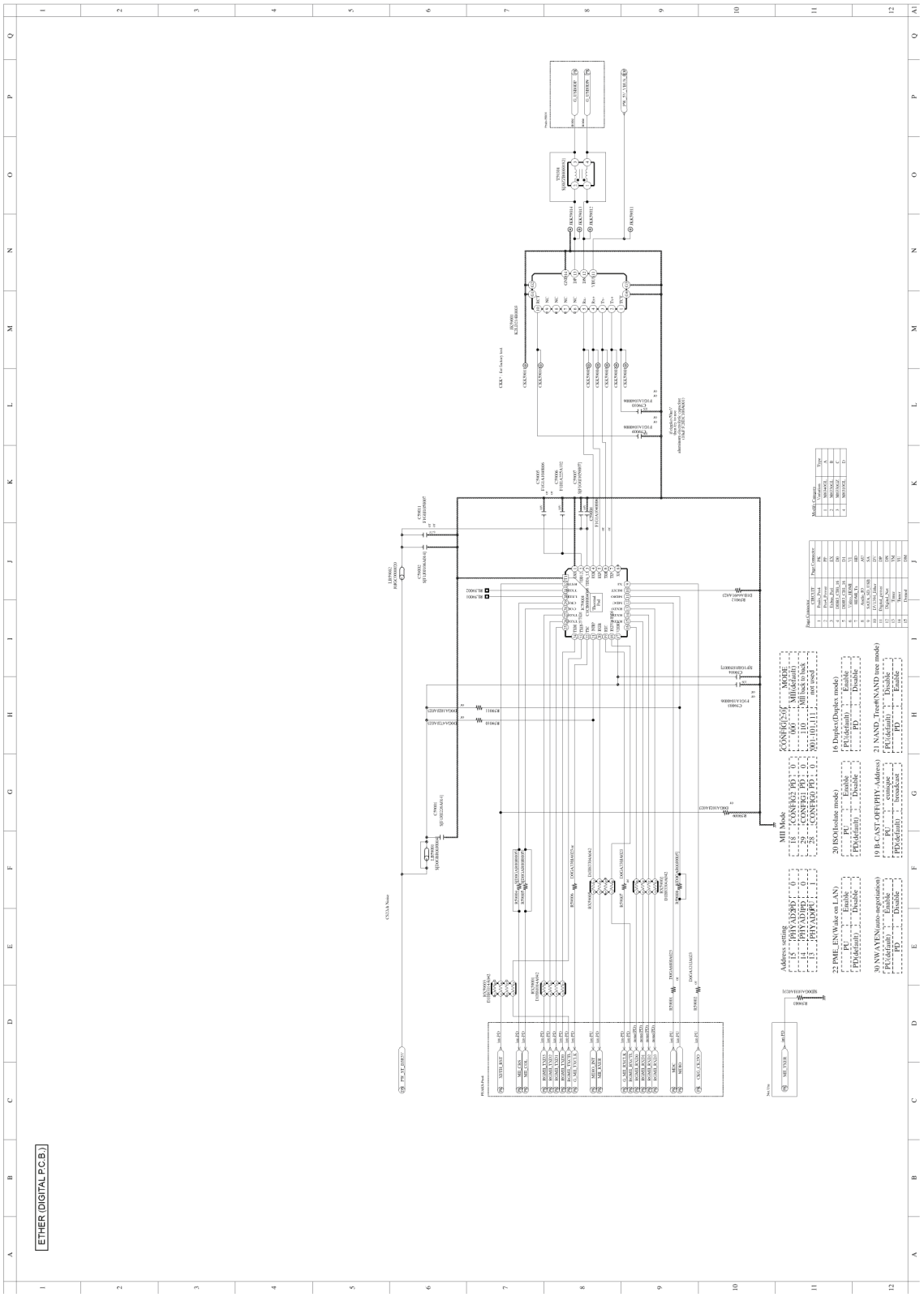
Model No. : DMR-PWT550GL/GZ DIGI NET SECTION(DIGITAL P.C.B.)



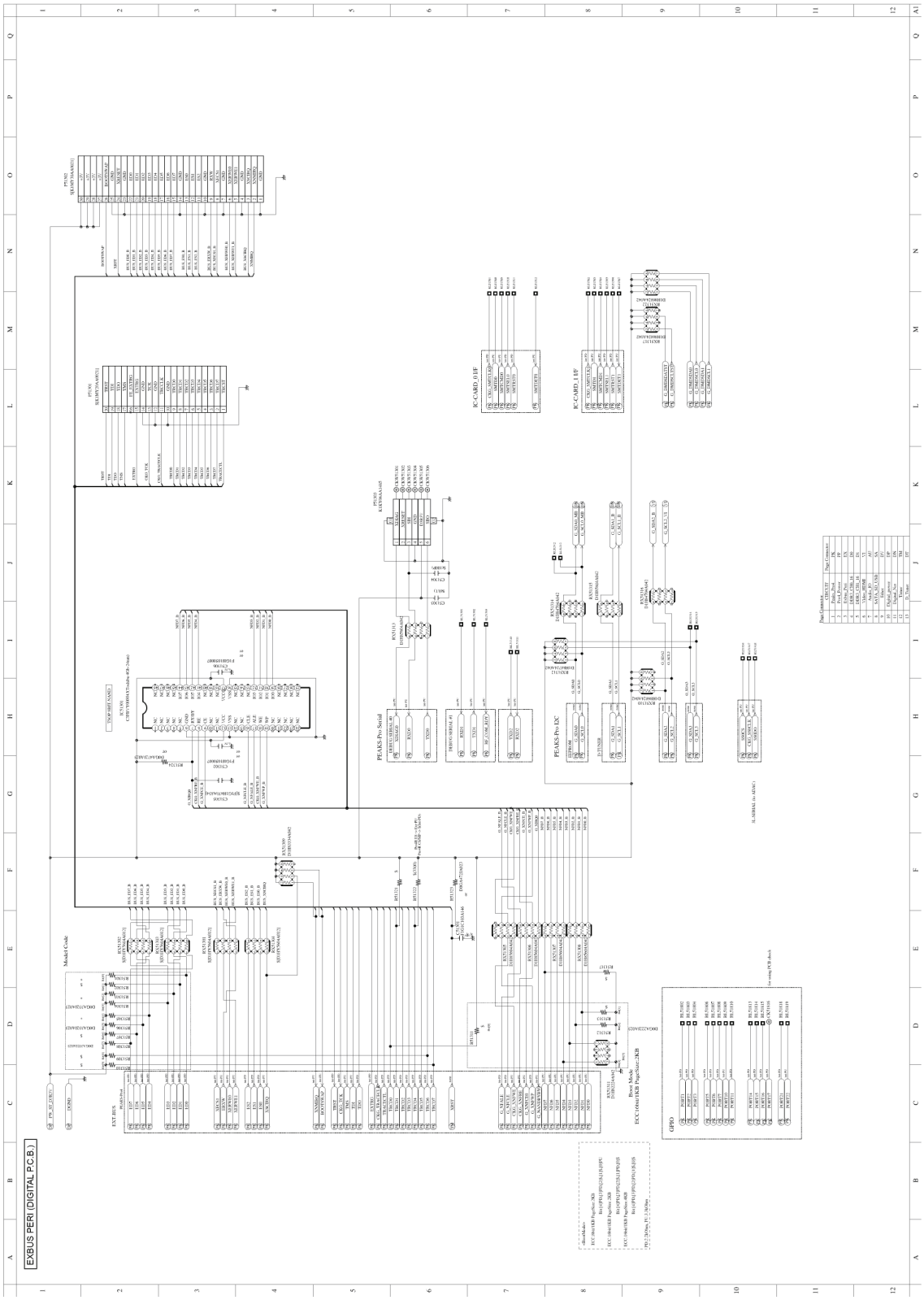
Model No. : DMR-PWT550GL/GZ DIGITAL POWER SECTION(DIGITAL P.C.B.)



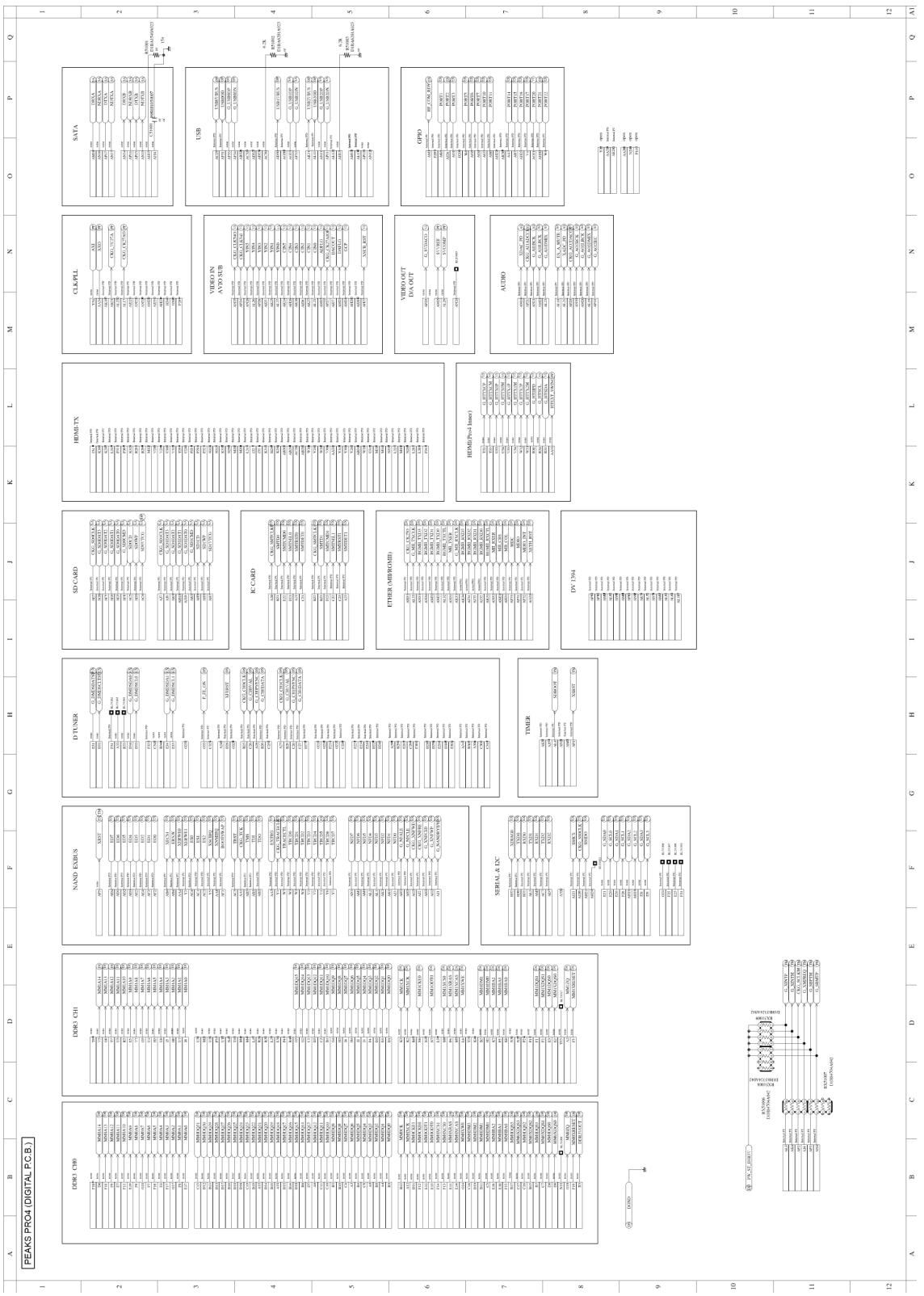
Model No. : DMR-PWT550GL/GZ ETHER SECTION(DIGITAL P.C.B.)



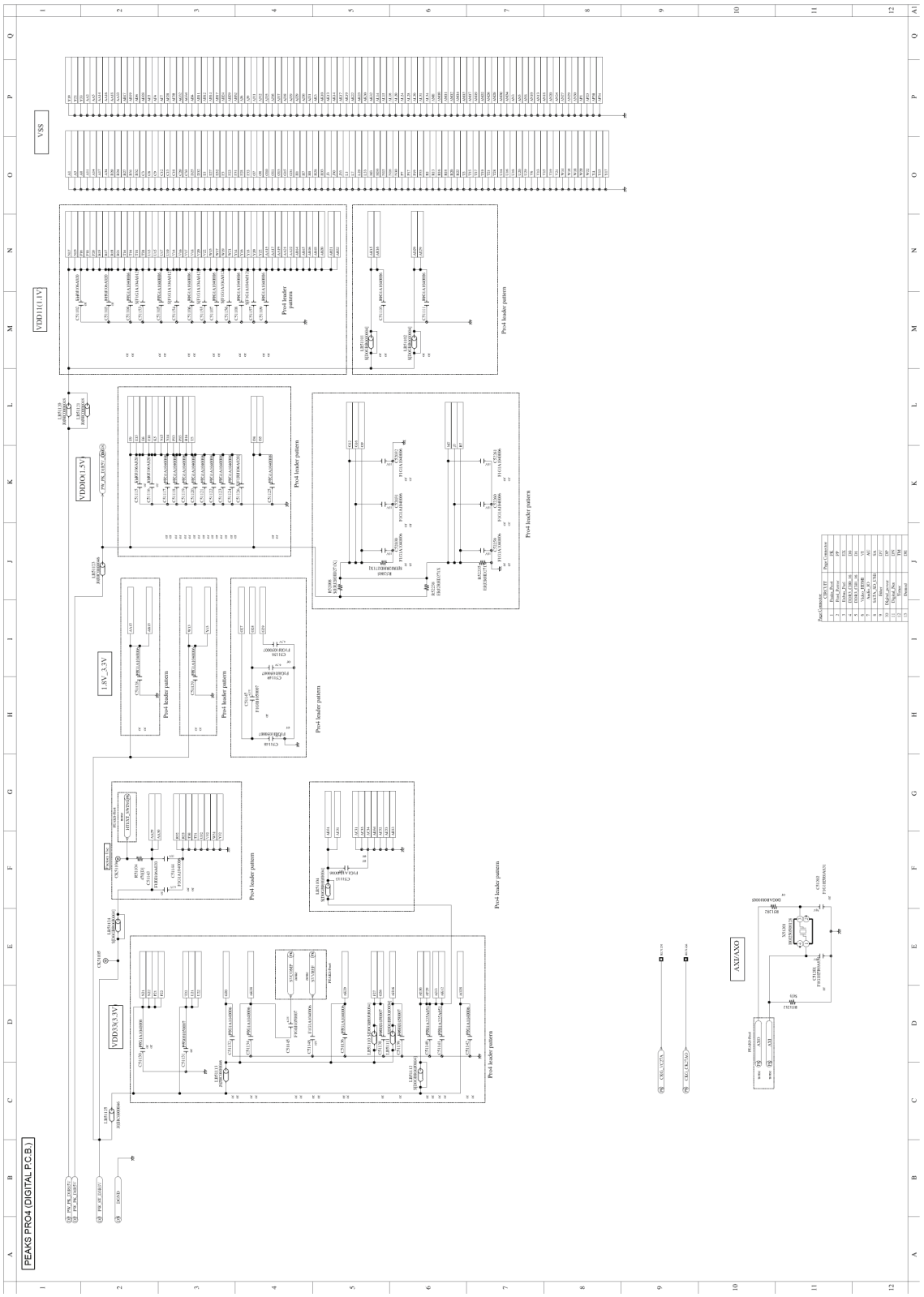
Model No. : DMR-PWT550GL/GZ EXBUS PERI SECTION(DIGITAL P.C.B.)



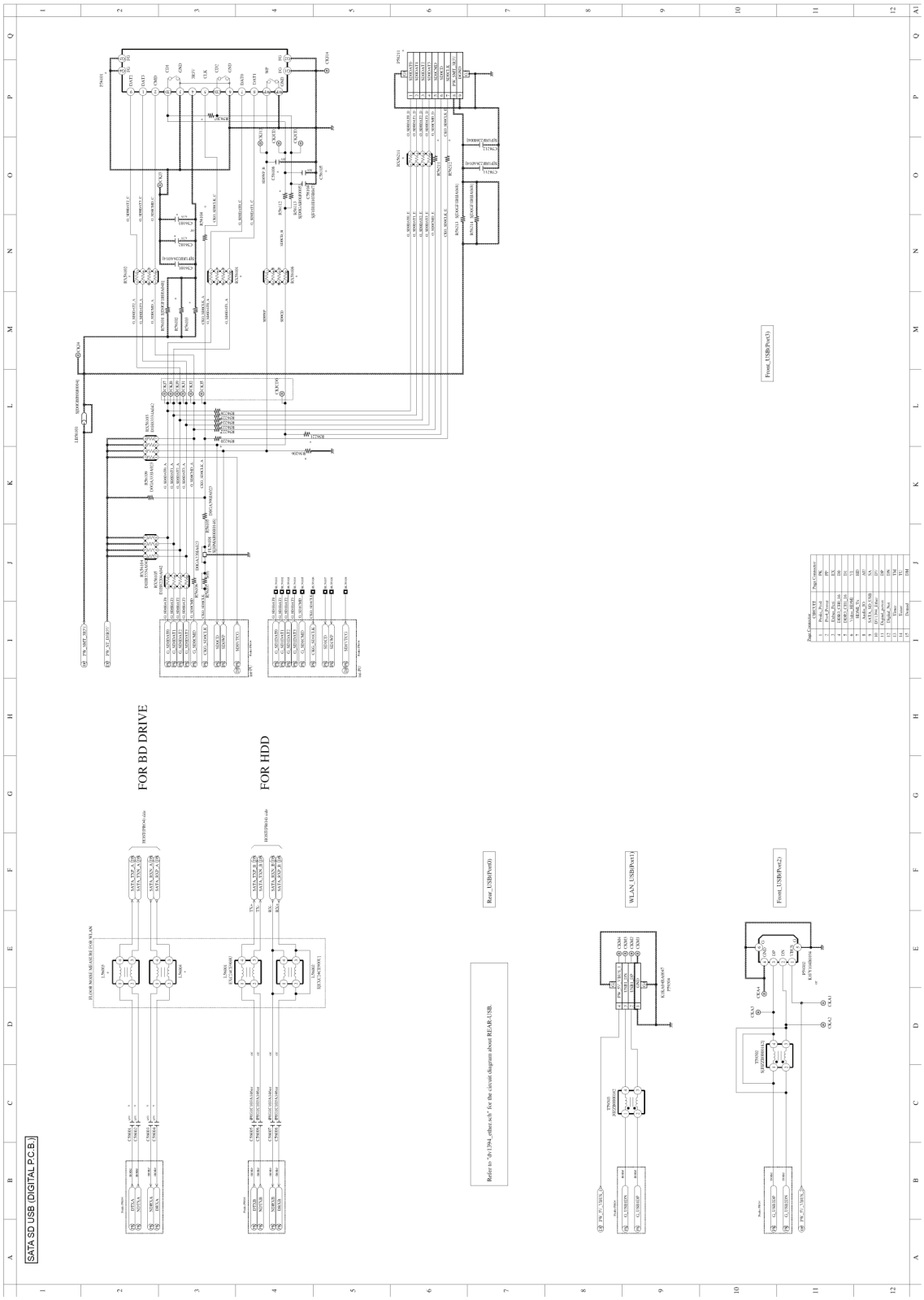
Model No. : DMR-PWT550GL/GZ PEAKS PRO4 SECTION(DIGITAL P.C.B.)



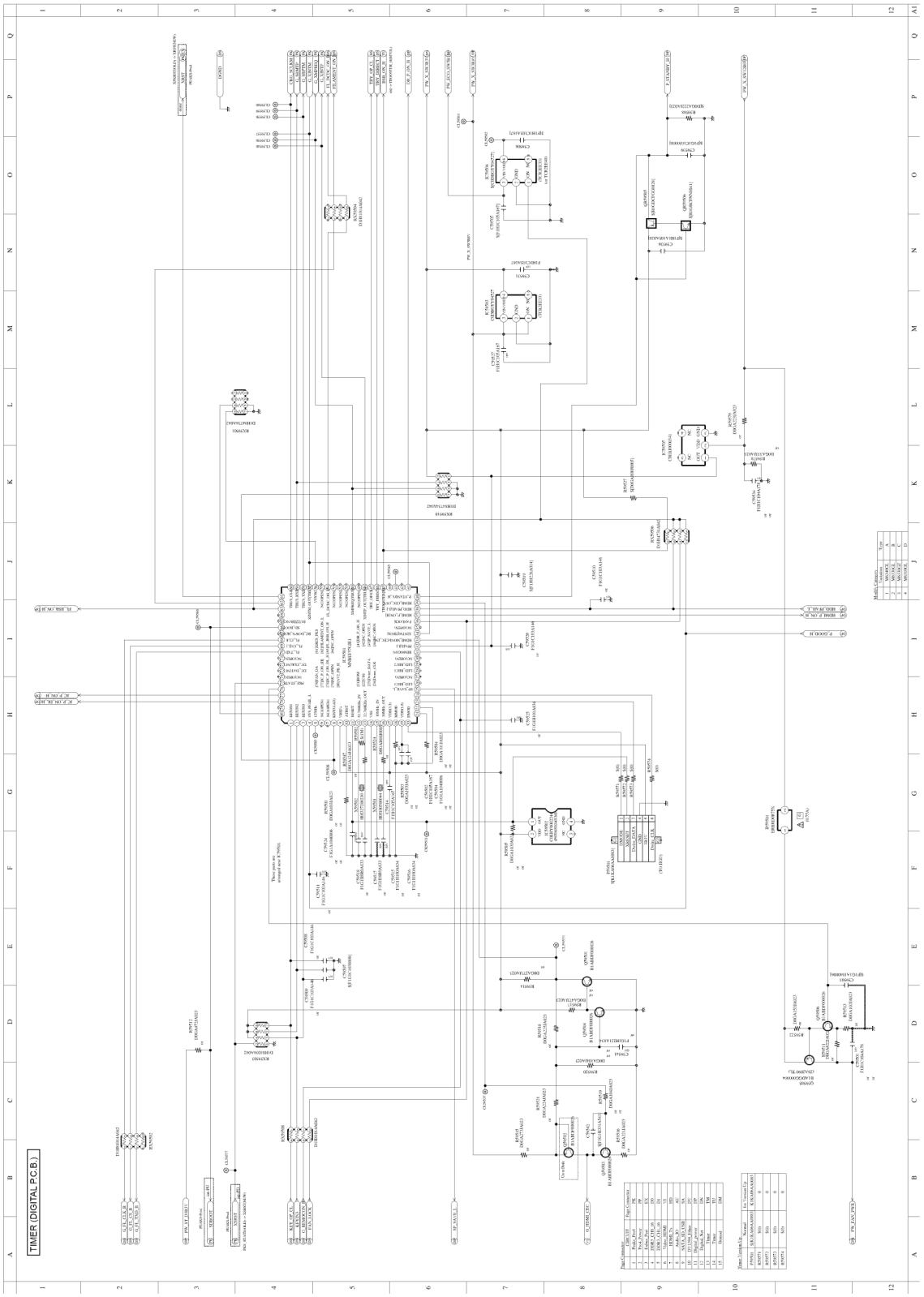
Model No. : DMR-PWT550GL/GZ PRO4 POWER SECTION(DIGITAL P.C.B.)



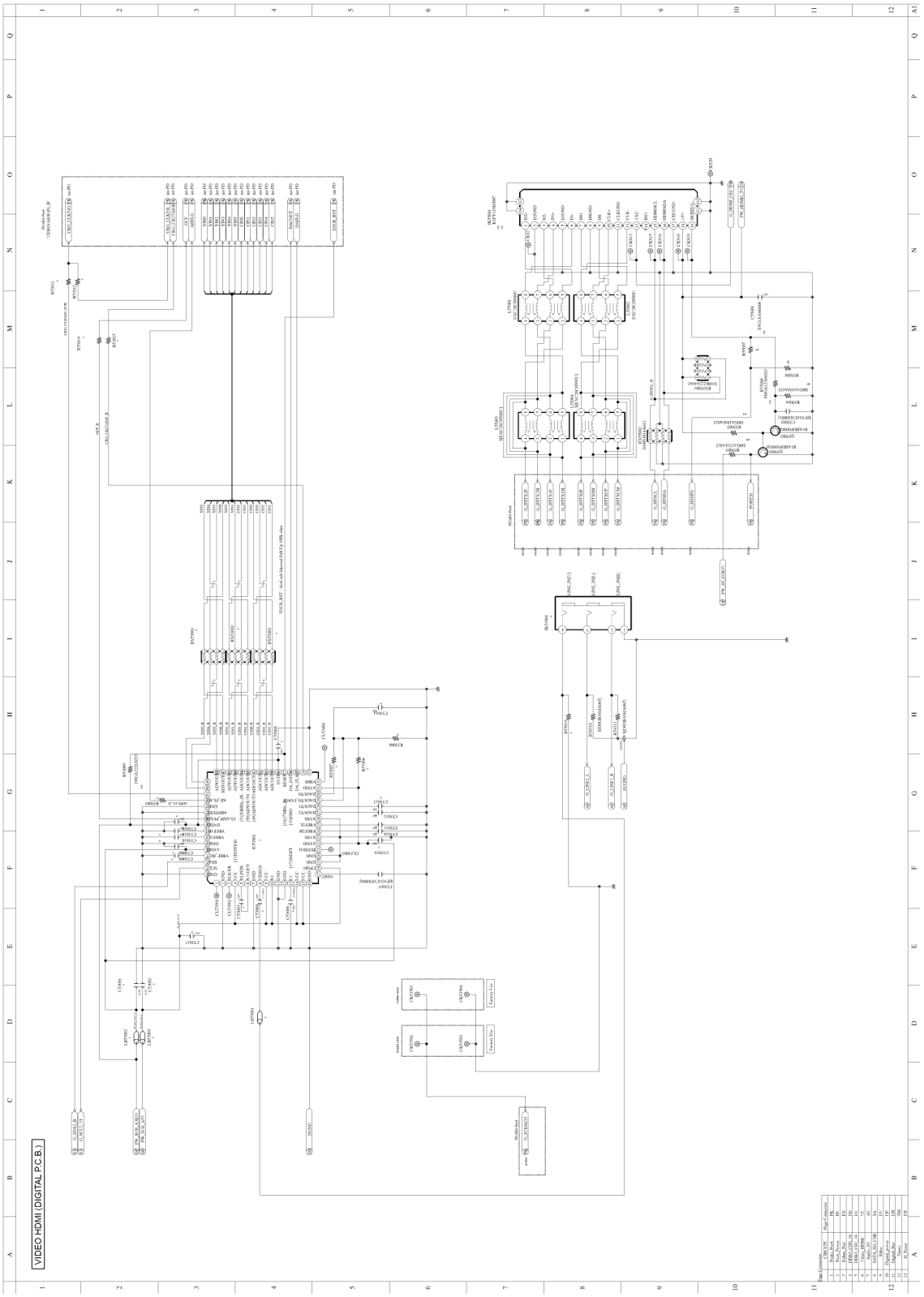
Model No. : DMR-PWT550GL/GZ SATA SD USB SECTION(DIGITAL P.C.B.)



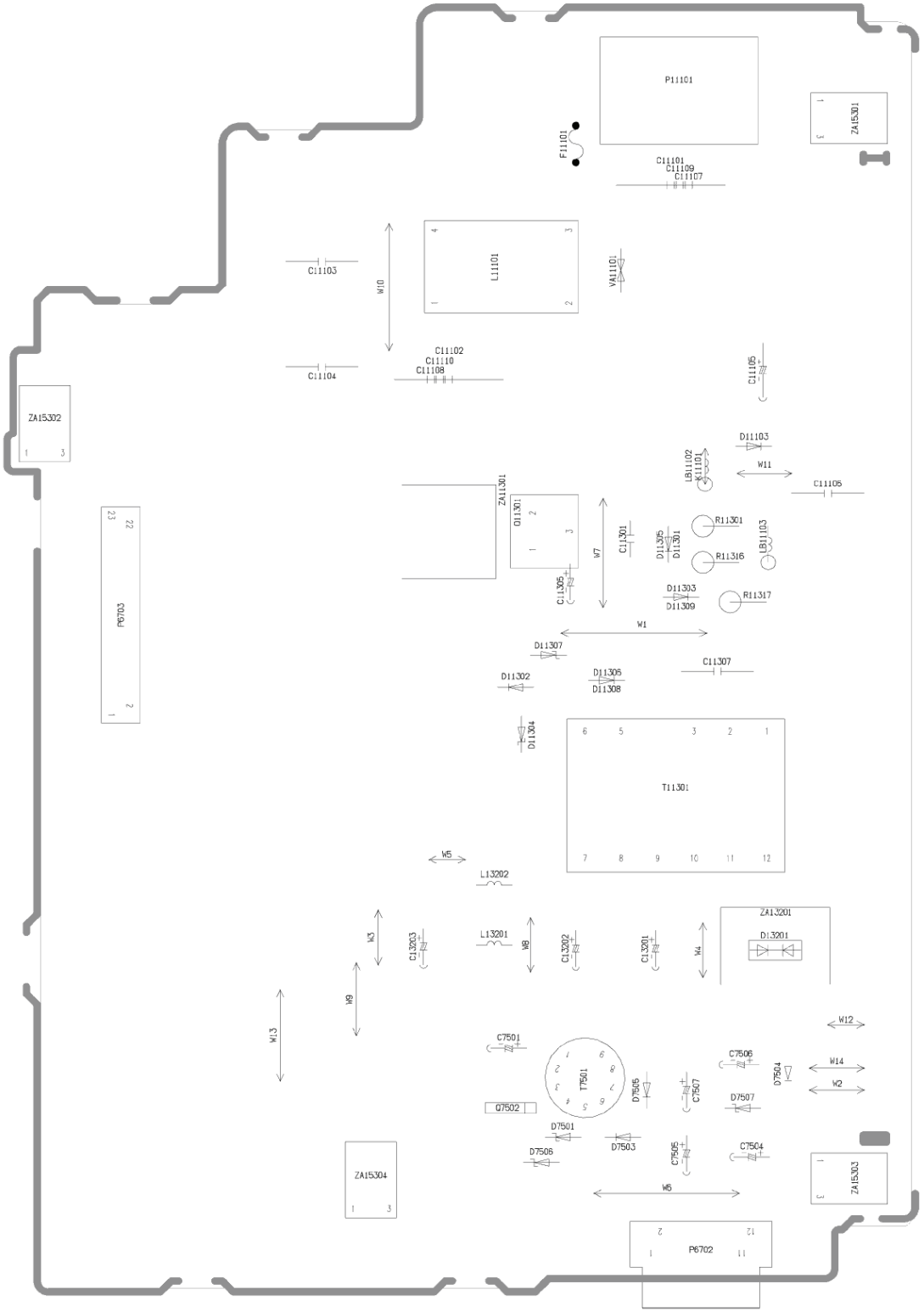
Model No. : DMR-PWT550GL/GZ TIMER SECTION(DIGITAL P.C.B.)



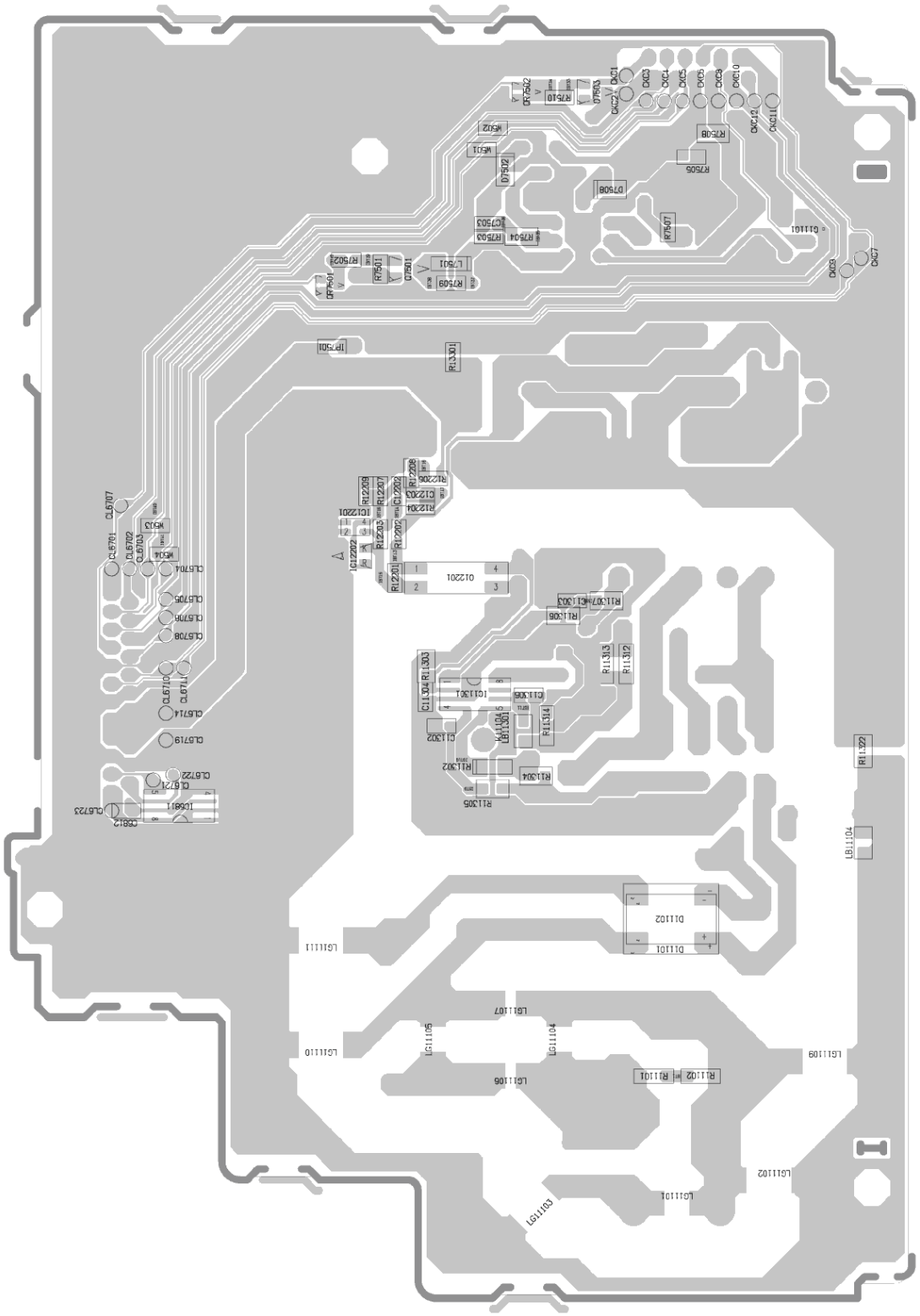
Model No. : DMR-PWT550GL/GZ VIDEO HDMI SECTION(DIGITAL P.C.B.)



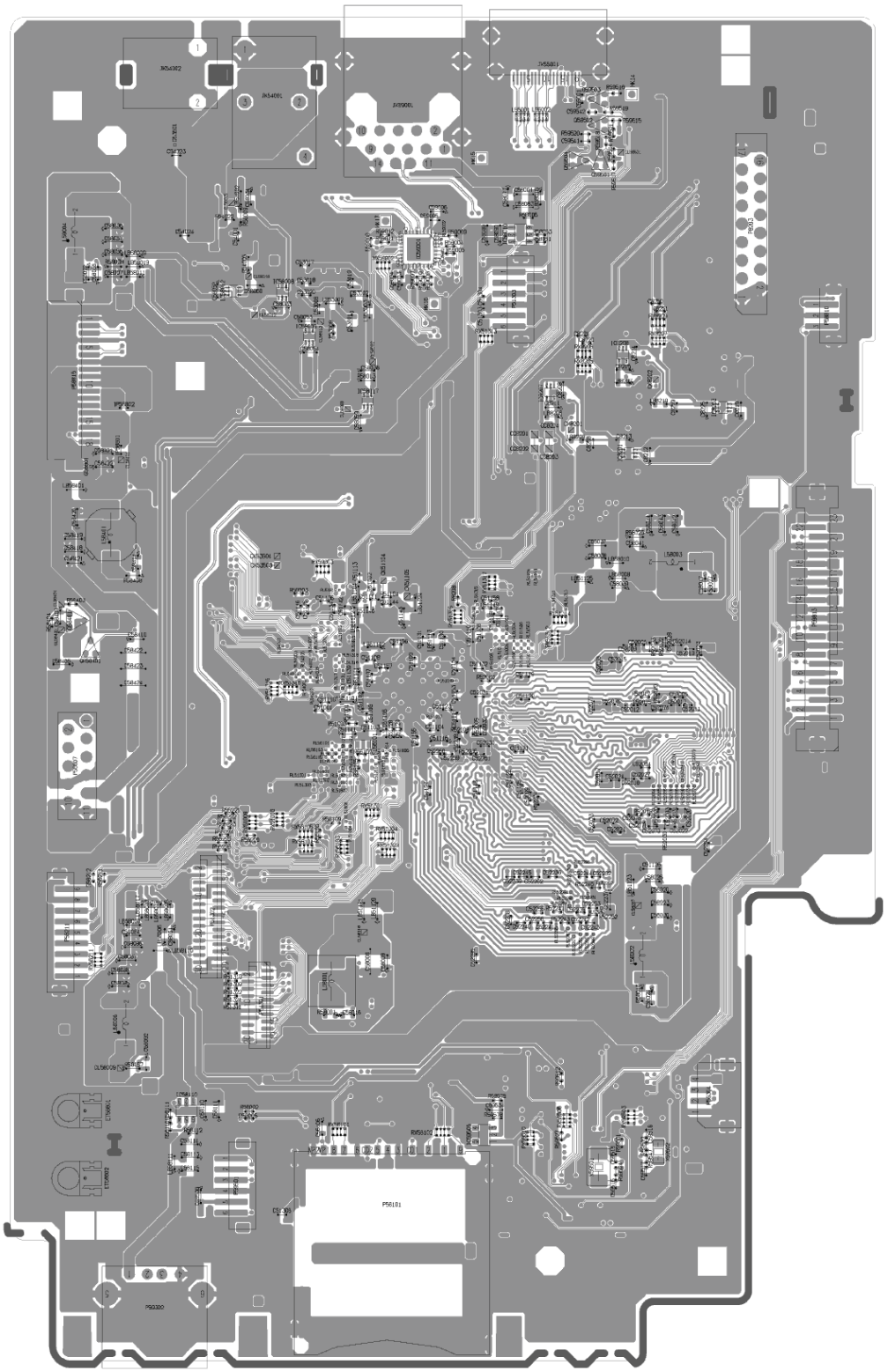
Model No. : DMR-PWT550GL/GZ MAIN P.C.B.(COMPONENT SIDE)



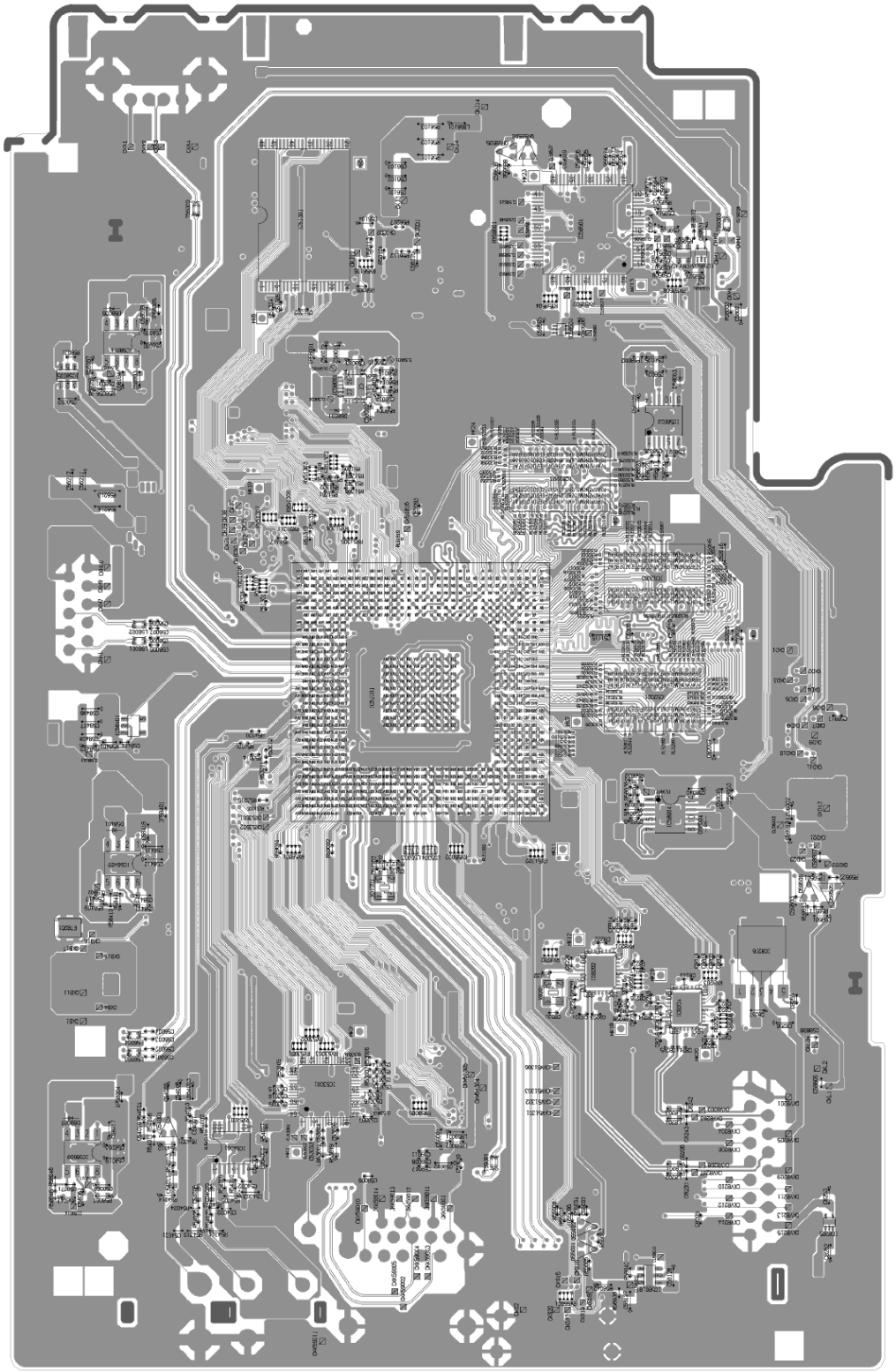
Model No. : DMR-PWT550GL/GZ MAIN P.C.B.(FOIL SIDE)



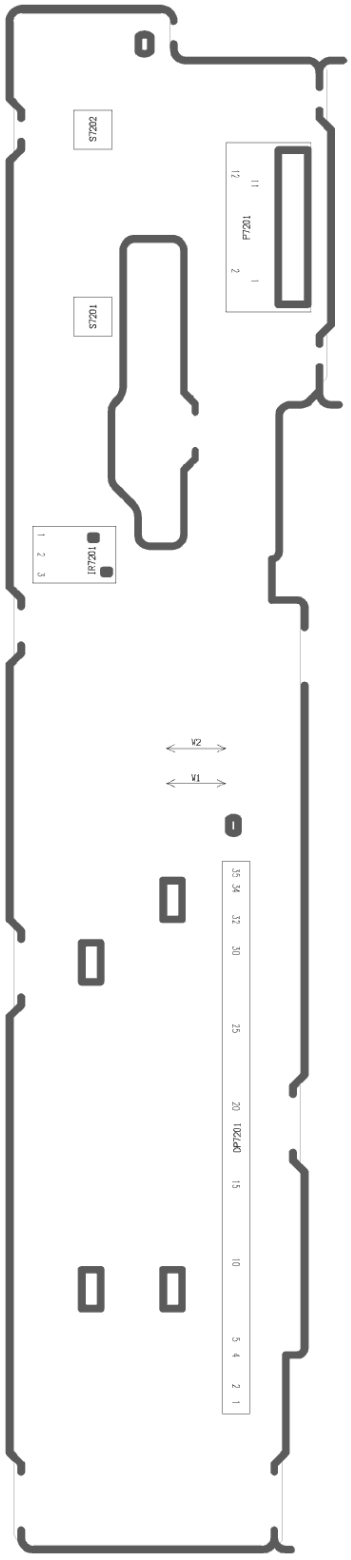
Model No. : DMR-PWT550GL/GZ DIGITAL P.C.B.(COMPONENT SIDE)



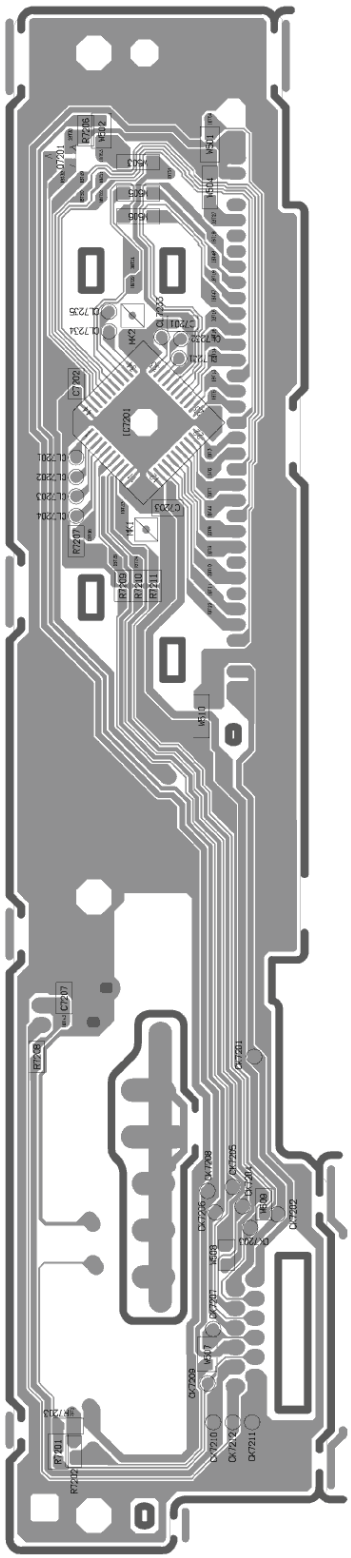
Model No. : DMR-PWT550GL/GZ DIGITAL P.C.B.(FOIL SIDE)



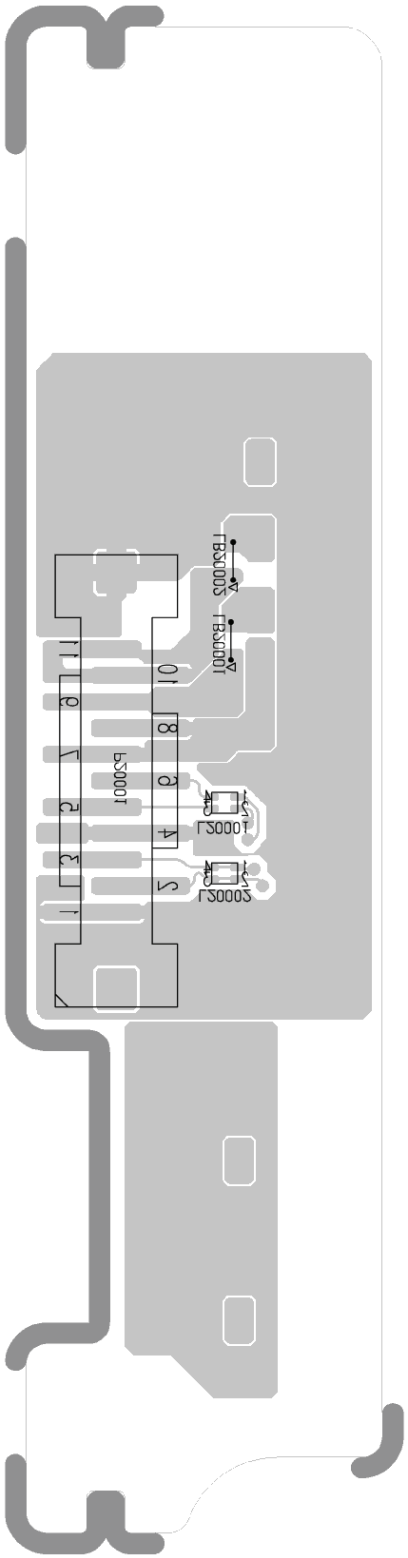
Model No. : DMR-PWT550GL/GZ FRONT SW P.C.B.(COMPONENT SIDE)



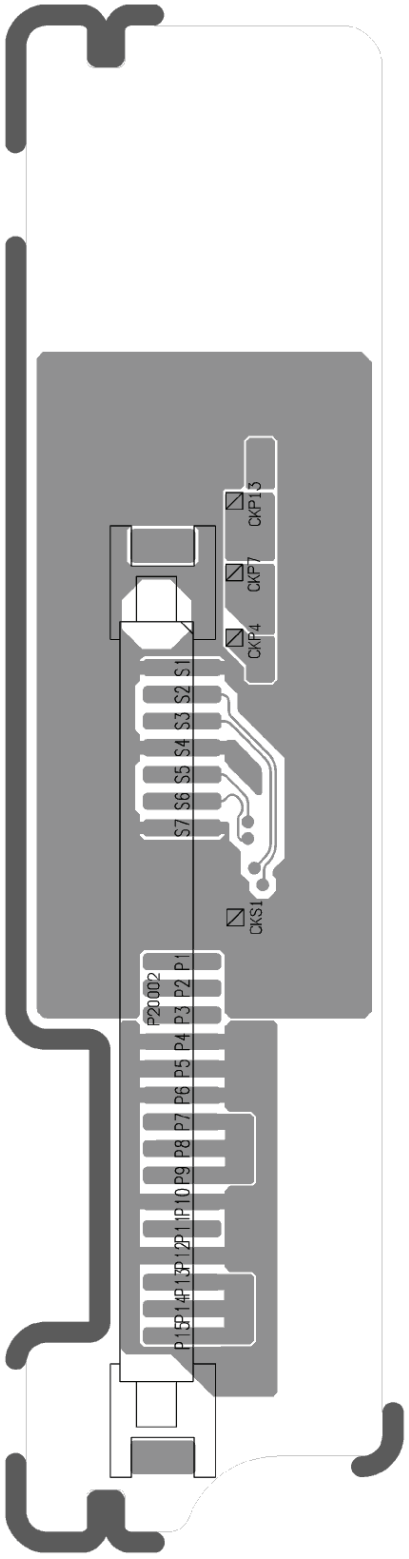
Model No. : DMR-PWT550GL/GZ FRONT SW P.C.B.(FOIL SIDE)



Model No. : DMR-PWT550GL/GZ SATA P.C.B.(COMPONENT SIDE)



Model No. : DMR-PWT550GL/GZ SATA P.C.B.(FOIL SIDE)



Model No. : DMR-PWT550GL/GZ Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		■	SUKB0439AB	MAIN P.C.B.		(RTL) E.S.D. PWT550GL
		■	SUKB0439AC	MAIN P.C.B.		(RTL) E.S.D. PWT550GZ
	⚠	C11101	F0CAF104A150	250V 0.1U	1	
	⚠	C11102	F0CAF104A150	250V 0.1U	1	
	⚠	C11103	F1B2G1520002	400V 0.0015U	1	
	⚠	C11104	F1B2G1520002	400V 0.0015U	1	
		C11105	F2B2G6800021	400V 68U	1	
	⚠	C11106	F1B2G2220003	400V 0.0022U	1	
		C11301	F1B3D561A132	2000V 560P	1	
		C11302	F1H1H221B052	50V 220P	1	
		C11303	F1H1H221B052	50V 220P	1	
		C11304	F1H1H102B047	50V 0.001U	1	
		C11305	F2A1E1010103	25V 100U	1	
		C11306	F1H1H104A783	50V 0.1U	1	
		C11307	F1B3A2220012	1000V 0.0022U	1	
		C12202	F1H1C104A178	16V 0.1U	1	
		C12203	F1H1C104A178	16V 0.1U	1	
		C13201	F2A1C1020095	16V 1000U	1	
		C13202	F2A1C1020095	16V 1000U	1	
		C13203	F2A1C471A938	16V 470U	1	
		C6812	F1H1C104A178	16V 0.1U	1	
		C7501	F2A1C1210022	16V 120U	1	
		C7503	F1H1H392A219	50V 3.9NF	1	
		C7504	F2A1C1210022	16V 120U	1	
		C7505	F2A1V560A387	35V 56U	1	
		C7506	F2A1H220A455	50V 22U	1	
		D11101	B0EDKT000009	DIODE	1	E.S.D.
		D11301	B0EAKV000090	DIODE	1	E.S.D.
		D11302	B0AADM000005	DIODE	1	E.S.D.
		D11304	B0BA02100037	DIODE	1	E.S.D.
		D11308	B0EAKV000090	DIODE	1	E.S.D.
		D11309	B0EAKV000090	DIODE	1	E.S.D.
		D13201	B0JBSG000053	DIODE	1	E.S.D.
		D7501	B0BA03600036	DIODE	1	E.S.D.
		D7502	B0ACCK000005	DIODE	1	E.S.D.
		D7503	B0AADM000005	DIODE	1	E.S.D.
		D7504	B0JAMD000026	DIODE	1	E.S.D.
		D7506	B0BA02100037	DIODE	1	E.S.D.
		D7507	B0BA01900059	DIODE	1	E.S.D.
	⚠	F11101	K5G202YA0149	FUSE	1	
		IC11301	C0DBBYY00061	IC	1	E.S.D.
		IC12202	C0DBZYY00531	IC	1	E.S.D.
		IC6811	SUCFT550GLE	IC	1	E.S.D. PWT550GL
		IC6811	SUCFT550GZE	IC	1	E.S.D. PWT550GZ
	⚠	IP7501	K5H501Z00005	IC PROTECTOR	1	E.S.D.
		K11104	D0GDR00J0004	1/8W 0	1	
	⚠	L11101	G0B503E00002	COIL	1	
		L13201	G0C100MA0085	COIL	1	
		L13202	G0C100MA0085	COIL	1	
		LB11103	J0JKB0000003	COIL	1	
	⚠	P11101	K2AA2B000017	AC INLET	1	
		P6702	K1KB12B00040	CONNECTOR (12P)	1	
		P6703	K1KY23AA1021	CONNECTOR (23P)	1	
		Q11301	B1CERU000019	TRANSISTOR	1	E.S.D.
	⚠	Q12201	B3PBA0000756	TRANSISTOR	1	E.S.D.
		Q7501	B1ADGF000010	TRANSISTOR	1	E.S.D.
		Q7502	B1ABMG000008	TRANSISTOR	1	E.S.D.
		Q7503	B1ABCE000019	TRANSISTOR	1	E.S.D.
		QR7501	B1GBCFJJ0040	TRANSISTOR	1	E.S.D.
		QR7502	B1GDCFNN0024	TRANSISTOR	1	E.S.D.
	⚠	R11101	D0GF155JA048	1/2W 1500K	1	
	⚠	R11102	D0GF155JA048	1/2W 1500K	1	

Model No. : DMR-PWT550GL/GZ Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		R11301	ERX2SJR27E	2W 0.27	1	
		R11302	ERJ14YJ100U	1/4W 10	1	
		R11303	D0GD473JA052	1/8W 47K	1	
		R11304	D0GD333JA052	1/8W 33K	1	
		R11305	D0GD101JA052	1/8W 100	1	
		R11306	D0GD103JA052	1/8W 10K	1	
		R11307	D0GD682JA052	1/8W 6.8K	1	
		R11312	D0GF8R2JA048	1/8W 8.2	1	
		R11313	D0GF8R2JA048	1/8W 8.2	1	
		R11316	ERG2SJ473E	2W 47K	1	
		R11317	ERG2SJ473E	2W 47K	1	
		R12201	D0GB102JA065	1/16W 1K	1	
		R12202	D0GB222JA065	1/16W 2.2K	1	
		R12203	D0GB103JA065	1/16W 10K	1	
		R12204	D0GB222JA065	1/16W 2.2K	1	
		R12206	D1BB3300A073	1/16W 330	1	
		R12207	D1BB4701A073	1/16W 47	1	
		R12208	D1BB1802A073	1/16W 18	1	
		R7501	D0GB472JA065	1/16W 4.7K	1	
		R7502	D0GB472JA065	1/16W 4.7K	1	
		R7503	D0GB562JA065	1/16W 5.6K	1	
		R7504	D0GD470JA052	1/16W 47	1	
		R7505	D0GB473JA065	1/16W 47K	1	
		R7508	D0GD271JA052	1/16W 270	1	
		R7509	D0GBR00J0004	1/16W 0	1	
		R7510	D0GB103JA065	1/16W 10K	1	
	⚠	T11301	G4DYA0000205	TRANSFORMER	1	
		T7501	G4D1A0000129	TRANSFORMER	1	
	⚠	VA11101	ERZE08A471CS	VARISTOR	1	
		W501	D0GBR00J0004	1/16W 0	1	
		W502	D0GBR00J0004	1/16W 0	1	
		W503	D0GBR00J0004	1/16W 0	1	
		W504	D0GBR00J0004	1/16W 0	1	
		ZA11301	VSC5603-B	RADIATOR SHEET	1	
		ZA11302	XYN3+J8FJ	SCREW	1	
		ZA13201	VSC5614-C	RADIATOR SHEET	1	
		ZA13202	XYN3+J8FJ	SCREW	1	
		ZA15301	K9ZZ00001279	EARTH PLATE	1	
		ZA15302	K9ZZ00001279	EARTH PLATE	1	
		ZA15303	K9ZZ00001279	EARTH PLATE	1	
		ZA15304	K9ZZ00001279	EARTH PLATE	1	
		■	SEP0437AA	SATA P.C.B.		(RTL) E.S.D.
		L20001	EXC24CE900U	COIL	1	
		LB20001	J0JHC0000046	COIL	1	
		LB20002	J0JHC0000046	COIL	1	
		P20001	K1KY11AA1442	CONNECTOR (11P)	1	
		P20002	K1KY22A00009	CONNECTOR (22P)	1	
		■	SEP0440AA	FRONT SW P.C.B.		(RTL) E.S.D.
		C7201	F1H1H103A219	50V 0.01U	1	
		C7202	F1H1C104A178	16V 0.1U	1	
		C7203	F1H1C104A178	16V 0.1U	1	
		C7207	F1H1C105A167	16V 1U	1	
		DP7201	A2BD00000199	LCD DISPLAY	1	
		IC7201	C0HBB0000068	IC	1	
		IR7201	PNJ4881M01VT	REMOTE SENSOR	1	
		P7201	K1KA12B00136	CONNECTOR(10P)	1	
		Q7201	B1ABDF000026	TRANSISTOR	1	E.S.D.
		R7201	D0GDR00J0004	1/8W 0	1	
		R7206	D0GB683JA065	1/16W 68K	1	
		R7207	D0GB393JA065	1/16W 393K	1	
		R7208	D0GB330JA065	1/16W 33K	1	
		R7209	D0GB101JA065	1/16W 100	1	

Model No. : DMR-PWT550GL/GZ Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		R7210	D0GB101JA065	1/16W 100	1	
		R7211	D0GB101JA065	1/16W 100	1	
		S7201	EVQ11A05R	SWITCH (OPEN/CLOSE)	1	
		S7202	EVQ11A05R	SWITCH (POWER)	1	
		W501	D0GDR00J0004	1/16W 0	1	
		W502	D0GDR00J0004	1/16W 0	1	
		W503	D0GFR00J0005	1/16W 0	1	
		W504	D0GFR00J0005	1/16W 0	1	
		W505	D0GFR00J0005	1/16W 0	1	
		W506	D0GFR00J0005	1/16W 0	1	
		W507	D0GDR00J0004	1/16W 0	1	
		W508	D0GBR00J0004	1/16W 0	1	
		W509	D0GBR00J0004	1/16W 0	1	
		W510	D0GFR00J0005	1/16W 0	1	
		ZB7201	RMN1116	LCD SPACER	1	
		■	SUKB0436AB	DIGITAL P.C.B.		E.S.D. PWT550GL
		■	SUKB0436AC	DIGITAL P.C.B.		E.S.D. PWT550GZ
		C51001	F1G0J1050007	6.3V 1U	1	
		C51102	F1J0J106A020	6.3V 10U	1	
		C51103	F1J0J106A020	6.3V 10U	1	
		C51104	F1G1A1040006	10V 0.1U	1	
		C51105	F1G1A1040006	10V 0.1U	1	
		C51106	F1G1A1040006	10V 0.1U	1	
		C51107	F1G1A1040006	10V 0.1U	1	
		C51108	F1G1A1040006	10V 0.1U	1	
		C51109	F1G1A1040006	10V 0.1U	1	
		C51110	F1G1A1040006	10V 0.1U	1	
		C51111	F1G1A1040006	10V 0.1U	1	
		C51113	F1G1A1040006	10V 0.1U	1	
		C51115	F1J0J106A020	6.3V 10U	1	
		C51116	F1J0J106A020	6.3V 10U	1	
		C51117	F1G1A1040006	10V 0.1U	1	
		C51118	F1G1A1040006	10V 0.1U	1	
		C51119	F1G1A1040006	10V 0.1U	1	
		C51120	F1G1A1040006	10V 0.1U	1	
		C51121	F1G1A1040006	10V 0.1U	1	
		C51122	F1G1A1040006	10V 0.1U	1	
		C51123	F1G1A1040006	10V 0.1U	1	
		C51124	F1G1A1040006	10V 0.1U	1	
		C51125	F1G1A1040006	10V 0.1U	1	
		C51128	F1G1A1040006	10V 0.1U	1	
		C51129	F1G1A1040006	10V 0.1U	1	
		C51130	F1G1A1040006	10V 0.1U	1	
		C51131	F1G0J1050007	6.3V 1U	1	
		C51132	F1G1A1040006	10V 0.1U	1	
		C51134	F1G1A1040006	10V 0.1U	1	
		C51136	F1G1A1040006	10V 0.1U	1	
		C51138	F1G0J1050007	6.3V 1U	1	
		C51139	F1G0J1050007	6.3V 1U	1	
		C51140	F1H1A225A051	10V 2.2U	1	
		C51141	F1H1A225A051	10V 2.2U	1	
		C51142	F1G1A1040006	10V 0.1U	1	
		C51143	F1J0J106A020	6.3V 10U	1	
		C51144	F1G1A1040006	10V 0.1U	1	
		C51145	F1G0J1050007	6.3V 1U	1	
		C51146	F1G1A1040006	10V 0.1U	1	
		C51147	F1G0J1050007	6.3V 1U	1	
		C51148	F1G0J1050007	6.3V 1U	1	
		C51149	F1G0J1050007	6.3V 1U	1	
		C51158	F1G0J1050007	6.3V 1U	1	
		C51201	F1G1H5R0A831	50V 5.0P	1	
		C51202	F1G1H5R0A831	50V 5.0P	1	

Model No. : DMR-PWT550GL/GZ Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		C51301	F1G1C103A146	16V 0.01U	1	
		C51302	F1G0J1050007	6.3V 1U	1	
		C51306	F1G0J1050007	6.3V 1U	1	
		C52001	F1G1A1040006	10V 0.1U	1	
		C52003	F1G1A1040006	10V 0.1U	1	
		C52004	F1G1A1040006	10V 0.1U	1	
		C52005	F1G1A1040006	10V 0.1U	1	
		C52006	F1G1A1040006	10V 0.1U	1	
		C52007	F1J0J106A020	6.3V 10U	1	
		C52008	F1G1A1040006	10V 0.1U	1	
		C52009	F1G1A1040006	10V 0.1U	1	
		C52011	F1G1A1040006	10V 0.1U	1	
		C52016	F1J0J106A020	6.3V 10U	1	
		C52017	F1G1A1040006	10V 0.1U	1	
		C52018	F1G1A1040006	10V 0.1U	1	
		C52019	F1G1A1040006	10V 0.1U	1	
		C52029	F1G0J1050007	6.3V 1U	1	
		C52030	F1G1A1040006	10V 0.1U	1	
		C52031	F1G1A1040006	10V 0.1U	1	
		C52032	F1G1A1040006	10V 0.1U	1	
		C52071	F1G1A1040006	10V 0.1U	1	
		C52074	F1G1A1040006	10V 0.1U	1	
		C52075	F1G1A1040006	10V 0.1U	1	
		C52076	F1G1A1040006	10V 0.1U	1	
		C52077	F1G1A1040006	10V 0.1U	1	
		C52078	F1G1A1040006	10V 0.1U	1	
		C52202	F1G1A1040006	10V 0.1U	1	
		C52235	F1G1A1040006	10V 0.1U	1	
		C52236	F1G1A1040006	10V 0.1U	1	
		C52237	F1J0J106A020	6.3V 10U	1	
		C52238	F1G1A1040006	10V 0.1U	1	
		C52239	F1G1A1040006	10V 0.1U	1	
		C52241	F1G1A1040006	10V 0.1U	1	
		C52259	F1G1A1040006	10V 0.1U	1	
		C52260	F1G1A1040006	10V 0.1U	1	
		C52261	F1G1A1040006	10V 0.1U	1	
		C54008	F1J0J2260004	6.3V 22U	1	
		C54009	F1H1C104A178	16V 0.1U	1	
		C54010	F1J1C1060001	16V 10U	1	
		C54011	F1J1C1060001	16V 10U	1	
		C55001	F1G1A1040006	10V 0.1U	1	
		C56001	F1G1C103A146	16V 0.01U	1	
		C56002	F1G1C103A146	16V 0.01U	1	
		C56003	F1G1C103A146	16V 0.01U	1	
		C56004	F1G1C103A146	16V 0.01U	1	
		C56005	F1G1C103A146	16V 0.01U	1	
		C56006	F1G1C103A146	16V 0.01U	1	
		C56007	F1G1C103A146	16V 0.01U	1	
		C56008	F1G1C103A146	16V 0.01U	1	
		C56102	F1J0J2260004	6.3V 22U	1	
		C56103	F1J0J106A014	6.3V 10U	1	
		C56105	F1H1H103B047	50V 0.01U	1	
		C56106	F1H1H103B047	50V 0.01U	1	
		C58002	F1H1E104A161	25V 0.1U	1	
		C58006	F1J0J106A014	6.3V 10U	1	
		C58007	F1H1C104A178	16V 0.1U	1	
		C58008	F1L0G107A002	4V 100U	1	
		C58009	F1H1C104A178	16V 0.1U	1	
		C58010	F1H1E104A161	25V 0.1U	1	
		C58011	F1J1C1060001	16V 10U	1	
		C58012	F1J1C1060001	16V 10U	1	
		C58013	F1J1C1060001	16V 10U	1	

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Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		C58014	F1H1C105A167	16V 1U	1	
		C58015	F1G1C822A146	16V 8200P	1	
		C58016	F1H1E104A161	25V 0.1U	1	
		C58018	F1G1A473A069	10V 0.047U	1	
		C58019	F1J1C1060001	16V 10U	1	
		C58020	F1J0J2260004	16V 1U	1	
		C58021	F1J0J106A014	6.3V 10U	1	
		C58022	F1H1E104A161	25V 0.1U	1	
		C58023	F1J0J2260004	6.3V 22U	1	
		C58024	F1J1C1060001	16V 10U	1	
		C58025	F1J1C1060001	16V 10U	1	
		C58026	F1H1C104A178	16V 0.1U	1	
		C58027	F1G1C153A146	16V 0.015U	1	
		C58028	F1H1E104A161	25V 0.1U	1	
		C58029	F1H1C105A167	16V 1U	1	
		C58030	F1J0J2260004	6.3V 22U	1	
		C58035	F1G1H470A834	50V 47P	1	
		C58037	F1J0J2260004	6.3V 22U	1	
		C58038	F1J0J2260004	6.3V 22U	1	
		C58039	F1H1C104A178	16V 0.1U	1	
		C58040	F1H1E104A161	25V 0.1U	1	
		C58041	F1H1C104A178	16V 0.1U	1	
		C58042	F1J0J106A014	6.3V 10U	1	
		C58043	F1J0J106A014	6.3V 10U	1	
		C58044	F1J0J106A014	6.3V 10U	1	
		C58045	F1J1C1060001	16V 10U	1	
		C58046	F1G1E222A144	25V 0.0022U	1	
		C58047	F1H1E104A161	25V 0.1U	1	
		C58048	F1H1C105A167	16V 1U	1	
		C58049	F1G1H470A834	50V 47P	1	
		C58052	F1J0J106A014	6.3V 10U	1	
		C58056	F1J0J106A014	6.3V 10U	1	
		C58057	F1J0J106A014	6.3V 10U	1	
		C58061	F1H1C104A178	16V 0.1U	1	
		C58066	F1H1E104A161	25V 0.1U	1	
		C58067	F1H1C105A167	16V 1U	1	
		C58068	F1H1C104A178	16V 0.1U	1	
		C58079	F1J1C1060001	16V 10U	1	
		C58080	F1J1C1060001	16V 10U	1	
		C58083	F1J0J106A014	6.3V 10U	1	
		C58084	F1H1C104A178	16V 0.1U	1	
		C58085	F1J0J106A014	6.3V 10U	1	
		C58086	F1J0J106A014	6.3V 10U	1	
		C58087	F1J0J106A014	6.3V 10U	1	
		C58088	F1J0J106A014	6.3V 10U	1	
		C58089	F1J0J106A014	6.3V 10U	1	
		C58090	F1J0J106A014	6.3V 10U	1	
		C58092	F1H1E104A161	25V 0.1U	1	
		C58093	F1H1C104A178	16V 0.1U	1	
		C58094	F1H1C105A167	16V 1U	1	
		C58110	F1J0J106A014	6.3V 10U	1	
		C58111	F1J0J106A014	6.3V 10U	1	
		C58113	F1J0J106A014	6.3V 10U	1	
		C58127	F1J0J106A014	6.3V 10U	1	
		C58128	F1J0J106A014	6.3V 10U	1	
		C58405	F1J1C1060001	16V 10U	1	
		C58406	F1J1C1060001	16V 10U	1	
		C58407	F1J1C1060001	16V 10U	1	
		C58408	F1J1C1060001	16V 10U	1	
		C58409	F1H1C105A167	16V 1U	1	
		C58411	F1H1C105A167	16V 1U	1	
		C58412	F1H1C104A178	16V 0.1U	1	

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Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		C58413	F1J1C1060001	16V 10U	1	
		C58414	F1H1E104A161	25V 0.1U	1	
		C58415	F1J1C1060001	16V 10U	1	
		C58418	F1J0J106A014	6.3V 10U	1	
		C58419	F1J0J106A014	6.3V 10U	1	
		C58420	F1J0J106A014	6.3V 10U	1	
		C58421	F1H1C104A178	16V 0.1U	1	
		C58422	F1K0J2260004	6.3V 22U	1	
		C58423	F1K0J2260004	6.3V 22U	1	
		C58424	F1K0J2260004	6.3V 22U	1	
		C58806	F1G1C103A146	16V 0.01U	1	
		C58807	F1G1E102A086	25V 1000P	1	
		C58808	F1G1H101A834	50V 100P	1	
		C58817	F1G1E102A086	25V 1000P	1	
		C59003	F1G1A1040006	10V 0.1U	1	
		C59005	F1G1A1040006	10V 0.1U	1	
		C59006	F1H1A225A102	10V 2.2U	1	
		C59008	F1G1A1040006	10V 0.1U	1	
		C59009	F1G1A1040006	10V 0.1U	1	
		C59010	F1G1A1040006	10V 0.1U	1	
		C59011	F1G0J1050007	6.3V 1U	1	
		C59501	F1H1C104A178	16V 0.1U	1	
		C59502	F1H1C105A167	16V 1U	1	
		C59504	F1G1A1040006	10V 0.1U	1	
		C59508	F1G1C103A146	16V 0.01U	1	
		C59509	F1G1C103A146	16V 0.01U	1	
		C59510	F1G1C103A146	16V 0.01U	1	
		C59511	F1G1C103A146	16V 0.01U	1	
		C59514	F1H1C105A167	10V 0.1U	1	
		C59515	F1G1H100A834	50V 10P	1	
		C59516	F1G1H100A834	50V 10P	1	
		C59517	F1G1H8R0A833	50V 8.0P	1	
		C59518	F1G1H8R0A833	50V 8.0P	1	
		C59524	F1G1A1040006	10V 0.1U	1	
		C59525	F1G1H101A834	50V 100P	1	
		C59526	F1G1C103A146	16V 0.01U	1	
		C59527	F1H1C105A167	16V 1U	1	
		C59531	F1H1C105A167	16V 1U	1	
		C59534	F1H1C104A178	16V 0.1U	1	
		C59541	F1G1H221A834	50V 220P	1	
		C8205	F1G1A1040006	10V 0.1U	1	
		C8208	F1H1C105A167	16V 1U	1	
		C8211	F1H1C105A167	16V 1U	1	
		C8212	F1H1C105A167	16V 1U	1	
		C8213	F1H1C105A167	16V 1U	1	
		C8214	F1H1C105A167	16V 1U	1	
		C8215	F1H1C105A167	16V 1U	1	
		C8216	F1G1H150A834	50V 15P	1	
		C8217	F1G1H150A834	50V 15P	1	
		C8218	F1G1A1040006	10V 0.1U	1	
		C8219	F1H1C105A167	16V 1U	1	
		C8220	F1G1H8R0A833	50V 8.0P	1	
		C8221	F1G1H8R0A833	50V 8.0P	1	
		C8222	F1G1A1040006	10V 0.1U	1	
		C8225	F1H1C105A167	16V 1U	1	
		C8226	F1G1H8R0A833	50V 8.0P	1	
		C8227	F1G1A1040006	10V 0.1U	1	
		C8228	F1G1A1040006	10V 0.1U	1	
		C8229	F1G1A1040006	10V 0.1U	1	
		C8230	F1G1H8R0A833	50V 8.0P	1	
		C8231	F1G1H100A834	50V 10P	1	
		C8232	F1G1H100A834	50V 10P	1	

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Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		C8233	F1G1H560A834	50V 56P	1	
		C8234	F1G1H150A834	50V 15P	1	
		C8235	F1G1H150A834	50V 15P	1	
		C8236	F1G1A1040006	10V 0.1U	1	
		C8240	F1G1A1040006	10V 0.1U	1	
		C8242	F1G1H8R0A833	50V 8.0P	1	
		C8243	F1G1H8R0A833	50V 8.0P	1	
		C8246	F1G1A1040006	10V 0.1U	1	
		C8247	F1G1A1040006	10V 0.1U	1	
		C8248	F1G1A1040006	10V 0.1U	1	
		C8250	F1G1H8R0A833	50V 8.0P	1	
		C8251	F1G1H8R0A833	50V 8.0P	1	
		C8252	F1H1C105A167	16V 1U	1	
		C8253	F1H1C105A167	16V 1U	1	
		C8254	F1G1E102A086	25V 1000P	1	
		C8255	F1G1A1040006	10V 0.1U	1	
		C8256	F1J0J106A014	6.3V 10U	1	
		C8257	F1H1C105A167	16V 1U	1	
		C8260	F1G1A1040006	10V 0.1U	1	
		C8261	F1G1A1040006	10V 0.1U	1	
		D58001	B0JCMD000077	DIODE	1	E.S.D.
		D58003	B0JCMD000077	DIODE	1	E.S.D.
		D58004	B0JCMD000077	DIODE	1	E.S.D.
		D58006	B0JCMD000077	DIODE	1	E.S.D.
		D58007	B0JCMD000077	DIODE	1	E.S.D.
		D58401	B0JCMD000077	DIODE	1	E.S.D.
		ET58801	K4AD01D00006	EARTH PLATE	1	E.S.D.
		ET58802	K4AD01D00006	EARTH PLATE	1	E.S.D.
		ET8201	K4AD01D00007	EARTH PLATE	1	E.S.D.
		IC51001	SUKB0436AB	IC	1	E.S.D. PWT550GL
		IC51001	SUKB0436AC	IC	1	E.S.D. PWT550GZ
		IC51301	SUKB0436AB	IC	1	E.S.D. PWT550GL
		IC51301	SUKB0436AC	IC	1	E.S.D. PWT550GZ
		IC52000	C3ABUY000051	IC	1	E.S.D.
		IC52001	C3ABUY000051	IC	1	E.S.D.
		IC52203	C3ABUY000051	IC	1	E.S.D.
		IC58001	VUEALLPT061	IC	1	E.S.D. SPC
		IC58002	C0DBAYY01361	IC	1	E.S.D.
		IC58004	C0DBAYY01361	IC	1	E.S.D.
		IC58005	C0DBZYY00541	IC	1	E.S.D.
		IC58009	C0DBAYY01469	IC	1	E.S.D.
		IC58010	C0DBZYY00577	IC	1	E.S.D.
		IC58011	C0DBAYY01445	IC	1	E.S.D.
		IC58018	C0DBZYY00541	IC	1	E.S.D.
		IC58110	C0DBZYY00577	IC	1	E.S.D.
		IC58401	C0EBK0000206	IC	1	E.S.D.
		IC58402	C0DBAYY01445	IC	1	E.S.D.
		IC59001	VUEALLPT085	IC	1	E.S.D. SPC
		IC59501	MNBEF57GJE1	IC	1	E.S.D.
		IC59502	C0EBY0002244	IC	1	E.S.D.
		IC59503	C0DBGYY04527	IC	1	E.S.D.
		IC59505	C0EBJ0000341	IC	1	E.S.D.
		IC8201	C0DBGYY04527	IC	1	E.S.D.
		IC8202	SUBF000008	IC	1	E.S.D.
		IC8203	C0DBGYY04527	IC	1	E.S.D.
		IC8204	SUBF000008	IC	1	E.S.D.
		IC8205	C0DBGYY04527	IC	1	E.S.D.
		IC8206	C0DBGYY02084	IC	1	E.S.D.
		IC8207	C0DBGYY04532	IC	1	E.S.D.
		IC8208	C0DBGYY04532	IC	1	E.S.D.
	⚠	IP58001	ERBRD2R00X	IC PROTECTOR	1	
	⚠	IP58002	ERBRD1R50X	IC PROTECTOR	1	

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Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
	⚠	IP58003	ERBRD1R50X	IC PROTECTOR	1	
	⚠	IP58004	ERBRD1R50X	IC PROTECTOR	1	
	⚠	IP58005	ERBRD2R00X	IC PROTECTOR	1	
	⚠	IP58401	ERBRD2R00X	IC PROTECTOR	1	
	⚠	IP58801	ERBRD2R50X	IC PROTECTOR	1	
	⚠	IP58802	ERBRD2R50X	IC PROTECTOR	1	
	⚠	IP59501	ERBRD0R75X	IC PROTECTOR	1	
		JK54002	K2HA102B0094	JACK AV	1	
		JK55001	K1FY119E0087	JACK HDMI	1	
		JK59001	K2LD214B0003	JACK LAN	1	
		L55001	EXC28CH900U	FILTER	1	
		L55002	EXC28CH900U	FILTER	1	
		L56001	EXC24CE900U	COIL	1	
		L56003	EXC24CE900U	COIL	1	
		L56004	EXC24CE900U	COIL	1	
		L58001	G1C1R5M00010	COIL	1	
		L58002	G1C2R2Z00006	COIL	1	
		L58003	G1C4R7Z00014	COIL	1	
		L58004	G1C4R7Z00014	COIL	1	
		L58006	G1C3R3Z00005	COIL	1	
		L58401	G1C3R3ZA0350	COIL	1	
		L8201	G1CR22JA0020	COIL	1	
		L8202	G1CR22JA0020	COIL	1	
		L8203	G1CR22JA0020	COIL	1	
		L8204	G1CR22JA0020	COIL	1	
		LB51113	J0JHC0000046	COIL	1	
		LB51120	J0JHC0000018	COIL	1	
		LB51121	J0JHC0000018	COIL	1	
		LB51123	J0JHC0000046	COIL	1	
		LB51125	J0JHC0000046	COIL	1	
		LB58002	J0JHC0000046	COIL	1	
		LB58006	J0JGC0000020	COIL	1	
		LB58007	J0JGC0000020	COIL	1	
		LB58008	J0JHC0000046	COIL	1	
		LB58010	J0JHC0000046	COIL	1	
		LB58011	J0JHC0000046	COIL	1	
		LB58016	J0JGC0000020	COIL	1	
		LB58017	J0JGC0000020	COIL	1	
		LB58025	J0JGC0000020	COIL	1	
		LB58110	J0JGC0000020	COIL	1	
		LB58111	J0JGC0000020	COIL	1	
		LB58401	D0GDR00J0004	1/8W 0	1	
		LB59002	J0JGC0000020	COIL	1	
		LB8206	J0JCC0000103	COIL	1	
		LB8207	J0JCC0000103	COIL	1	
		LB8209	J0JGC0000020	COIL	1	
		LB8210	J0JGC0000020	COIL	1	
		P51303	K1KY06AA1485	CONNECTOR (6P)	1	
		P56101	K1NA09E00163	CONNECTOR (9P)	1	
		P58807	K1KY11AA1610	CONNECTOR (11P)	1	
		P58810	K1KA03AA0083	CONNECTOR (3P)	1	
		P58813	K1KY23AA1442	CONNECTOR (23P)	1	
		P58815	K1MN18BA0147	CONNECTOR (18P)	1	
		P59302	K1FY104B0104	CONNECTOR (10P)	1	
		P59304	K1KA04BA0047	CONNECTOR (4P)	1	
		P8203	K1KY17AA0276	CONNECTOR (17P)	1	
		Q54001	B1ABDF000026	TRANSISTOR	1	E.S.D.
		Q55001	B1ABDF000026	TRANSISTOR	1	E.S.D.
		Q55002	B1ABDF000026	TRANSISTOR	1	E.S.D.
		Q58401	B1CHRD000092	TRANSISTOR	1	E.S.D.
		Q59501	B1ABDF000026	TRANSISTOR	1	E.S.D.
		Q59502	B1ABDF000026	TRANSISTOR	1	E.S.D.

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Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		Q59503	B1ABDF000026	TRANSISTOR	1	E.S.D.
		Q59504	B1ABDF000026	TRANSISTOR	1	E.S.D.
		Q59505	B1ADGG000004	TRANSISTOR	1	E.S.D.
		Q59506	B1ABDF000026	TRANSISTOR	1	E.S.D.
		QR58401	B1GBCFNN0041	TRANSISTOR	1	E.S.D.
		R51001	D1BA1540A023	1/16W 154	1	
		R51002	D1BA6201A023	1/16W 6.2K	1	
		R51003	D1BA6201A023	1/16W 6.2K	1	
		R51104	ERJ2RHD471X	1/16W 470	1	
		R51202	D0GAR00J0005	1/16W 0	1	
		R51304	D0GA332JA023	1/16W 3.3K	1	
		R51305	D0GA332JA023	1/16W 3.3K	1	
		R51306	D0GA332JA023	1/16W 3.3K	1	
		R51308	D0GA332JA023	1/16W 3.3K	1	
		R51312	D0GA222JA023	1/16W 2.2K	1	
		R51323	D0GA472JA023	1/16W 4.7K	1	
		R51324	D0GA472JA023	1/16W 4.7K	1	
		R52000	ERJ2RHD241X	1/16W 240	1	
		R52017	D0GA221JA023	1/16W 220	1	
		R52018	D0GA221JA023	1/16W 220	1	
		R52019	ERJ2RHD241X	1/16W 240	1	
		R52020	ERJ2RHD241X	1/16W 240	1	
		R52021	D0GA103JA023	1/16W 10K	1	
		R52030	ERJ2RHD271X	1/16W 270	1	
		R52031	ERJ2RHD271X	1/16W 270	1	
		R52032	ERJ2RHD271X	1/16W 270	1	
		R52033	ERJ2RHD271X	1/16W 270	1	
		R52234	ERJ2RHD241X	1/16W 240	1	
		R52235	ERJ2RHD271X	1/16W 270	1	
		R52238	ERJ2RHD271X	1/16W 270	1	
		R52241	D0GA111JA023	1/16W 110	1	
		R52243	ERJ2RHD241X	1/16W 240	1	
		R52245	D0GA103JA023	1/16W 10K	1	
		R52252	ERJ2RHD271X	1/16W 270	1	
		R52253	ERJ2RHD271X	1/16W 270	1	
		R53009	D0GA222JA023	1/16W 2.2K	1	
		R54004	D0GA102JA023	1/16W 1K	1	
		R54008	D0GA102JA023	1/16W 1K	1	
		R54011	D0GA152JA023	1/16W 1.5K	1	
		R54012	D0GB221JA065	1/16W 220	1	
		R54013	D0GB750JA065	1/16W 75	1	
		R54014	D0GB103JA065	1/16W 10K	1	
		R54020	D0GA680JA023	1/16W 68	1	
		R55003	D0GA332JA023	1/16W 3.3K	1	
		R55004	D0GA103JA023	1/16W 10K	1	
		R55005	D0GA104JA023	1/16W 0.1U	1	
		R55006	D0GA123JA023	1/16W 12K	1	
		R56102	D0GF1R0JA048	1/2W 1	1	
		R56103	D0GF1R0JA048	1/2W 1	1	
		R56104	D0GA220JA023	1/16W 22	1	
		R56105	D0GA390JA023	1/16W 39	1	
		R56106	D0GA220JA023	1/16W 22	1	
		R56109	D0GA333JA023	1/16W 33K	1	
		R56112	D0GAR00J0005	1/16W 0	1	
		R56207	D0GAR00J0005	1/16W 0	1	
		R58001	D0GB4R7JA065	1/16W 4.7	1	
		R58002	D0GA223JA023	1/16W 22K	1	
		R58006	D0GA474JA023	1/16W 470K	1	
		R58007	D0GB223JA065	1/16W 22K	1	
		R58011	ERJ2RHD102X	1/16W 1K	1	
		R58014	ERJ2RHD911X	1/16W 910	1	
		R58015	ERJ3RED470V	1/16W 47	1	

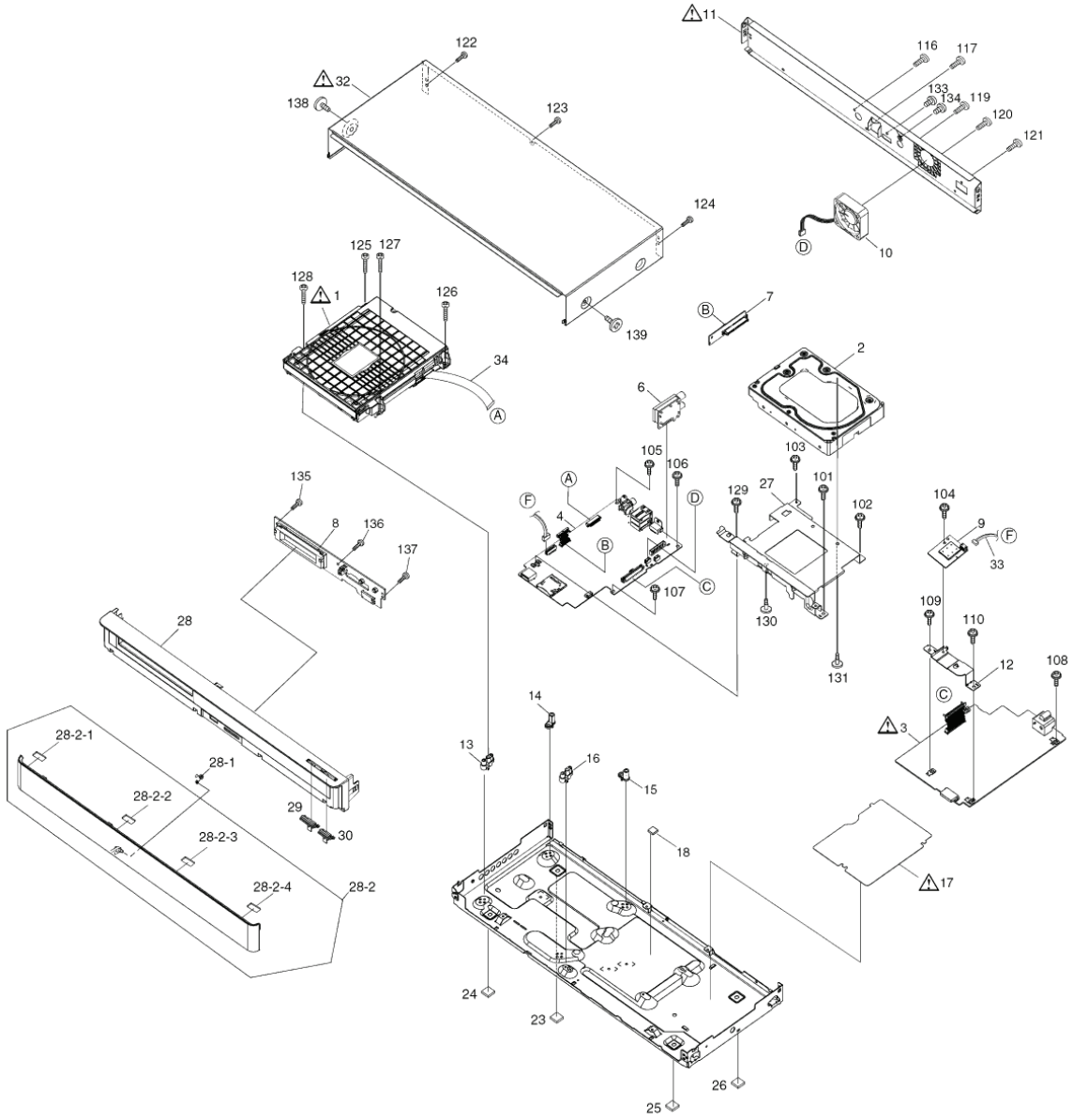
Model No. : DMR-PWT550GL/GZ Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		R58016	D0GB330JA065	1/16W 33	1	
		R58017	ERJ2RHD103X	1/16W 10K	1	
		R58020	ERJ2RHD103X	1/16W 10K	1	
		R58022	D0GB330JA065	1/16W 33	1	
		R58023	ERJ3RBD151V	1/16W 150	1	
		R58025	D0GB472JA065	1/16W 4.7K	1	
		R58027	D0GB220JA065	1/16W 22	1	
		R58029	ERJ2RHD103X	1/16W 10K	1	
		R58030	ERJ2RHD333X	1/16W 33K	1	
		R58031	ERJ2RHD223X	1/16W 22K	1	
		R58032	ERJ3RBD331V	1/16W 330	1	
		R58033	D0GA474JA023	1/16W 470K	1	
		R58039	D0GA474JA023	1/16W 470K	1	
		R58040	D0GA823JA023	1/16W 82K	1	
		R58042	D0GB2R2JA065	1/16W 2.2	1	
		R58046	ERJ2RHD393X	1/16W 39K	1	
		R58047	ERJ3RBD122V	1/16W 1.2K	1	
		R58048	ERJ2RHD103X	1/16W 10K	1	
		R58051	ERJ2RHD183X	1/16W 18K	1	
		R58053	ERJ2RHD152X	1/16W 1.5K	1	
		R58055	ERJ3RBD563V	1/16W 56K	1	
		R58056	ERJ3RBD821V	1/16W 820	1	
		R58057	D0GB330JA065	1/16W 33	1	
		R58067	ERJ3RBD103V	1/16W 10K	1	
		R58110	ERJ2RHD152X	1/16W 1.5K	1	
		R58111	ERJ2RHD183X	1/16W 18K	1	
		R58112	D0GA474JA023	1/16W 470K	1	
		R58401	ERJ3RBD222V	1/16W 2.2K	1	
		R58402	ERJ3RBD242V	1/16W 2.4K	1	
		R58403	D0GA823JA023	1/16W 82K	1	
		R58404	D0GA473JA023	1/16W 47K	1	
		R58408	D0GB330JA065	1/16W 33	1	
		R58409	ERJ3RBD821V	1/16W 820	1	
		R58410	ERJ3RBD563V	1/16W 56K	1	
		R58411	ERJ3RBD103V	1/16W 10K	1	
		R59001	D0GA680JA023	1/16W 68	1	
		R59002	D0GA121JA023	1/16W 120	1	
		R59006	D0GA330JA023	1/16W 33	1	
		R59007	D0GA330JA023	1/16W 33	1	
		R59009	D0GA102JA023	1/16W 1K	1	
		R59010	D0GA472JA023	1/16W 4.7K	1	
		R59011	D0GA102JA023	1/16W 1K	1	
		R59012	D1BA6491A023	1/16W 6.49K	1	
		R59501	D0GA103JA023	1/16W 10K	1	
		R59503	D0GA103JA023	1/16W 10K	1	
		R59504	D0GA101JA023	1/16W 100	1	
		R59505	D0GA103JA023	1/16W 10K	1	
		R59511	D0GA622JA023	1/16W 6.2K	1	
		R59512	D0GA472JA023	1/16W 4.7K	1	
		R59513	D0GA102JA023	1/16W 1K	1	
		R59514	D0GA273JA023	1/16W 27K	1	
		R59515	D0GA273JA023	1/16W 27K	1	
		R59516	D0GA221JA023	1/16W 220	1	
		R59517	D0GA473JA023	1/16W 47K	1	
		R59518	D0GA225JA023	1/16W 2200K	1	
		R59519	D0GA104JA023	1/16W 0.1U	1	
		R59520	D0GA104JA023	1/16W 0.1U	1	
		R59521	D0GA224JA023	1/16W 220K	1	
		R59522	D0GA153JA023	1/16W 15K	1	
		R59524	D0GAR00J0005	1/16W 0	1	
		R59547	D0GA124JA023	1/16W 120K	1	
		R59552	D0GA103JA023	1/16W 10K	1	

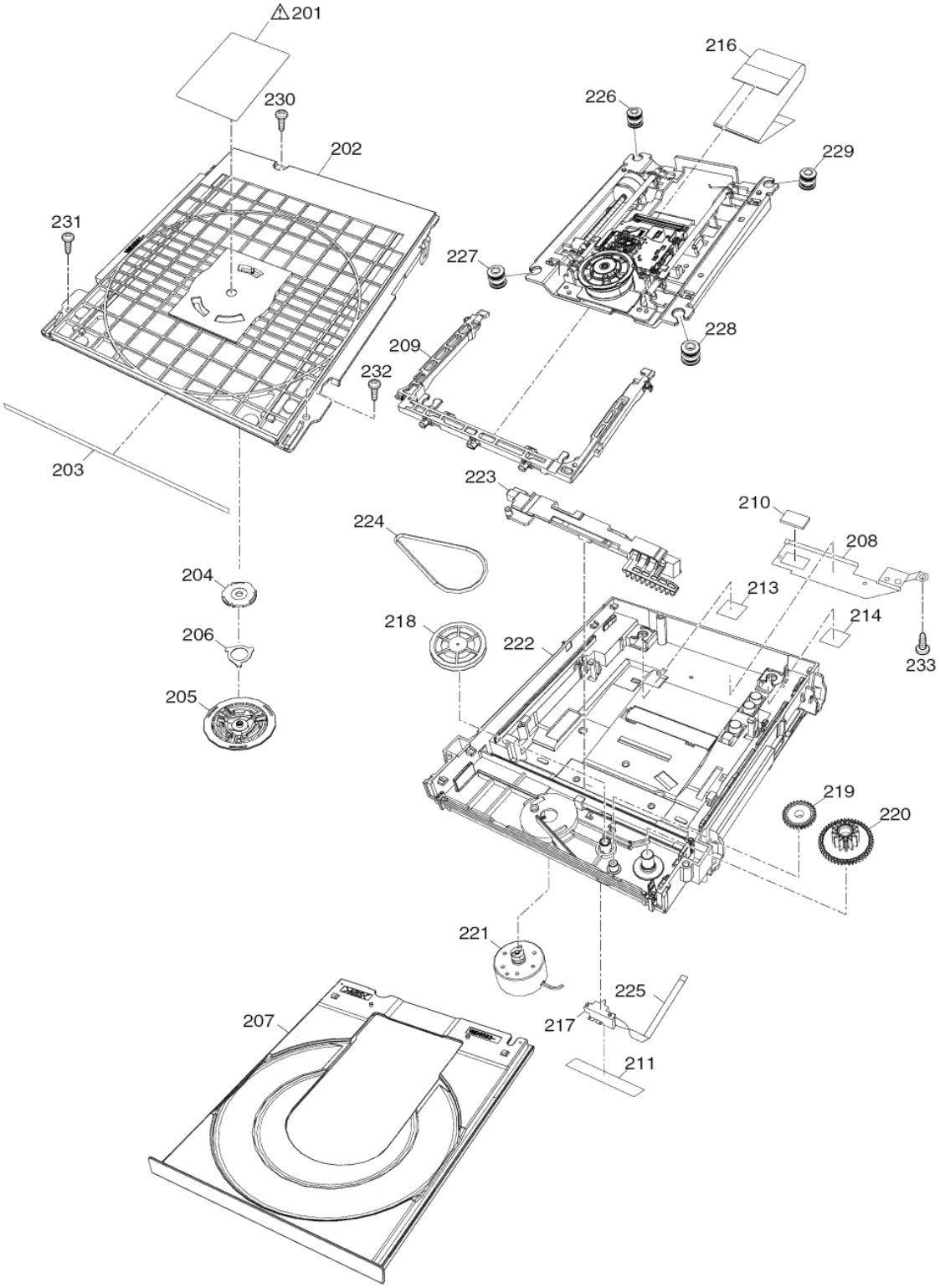
Model No. : DMR-PWT550GL/GZ Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		R59578	D0GA333JA023	1/16W 33K	1	
		R59579	D0GA223JA023	1/16W 23K	1	
		R8208	D0GA330JA023	1/16W 33	1	
		R8216	D0GA472JA023	1/16W 4.7K	1	
		R8225	D0GA472JA023	1/16W 4.7K	1	
		R8228	D0GA681JA023	1/16W 680	1	
		RX51006	D1H84704A042	RESISTOR-RESISTOR	1	
		RX51007	D1H84704A042	RESISTOR-RESISTOR	1	
		RX51008	D1H83324A042	RESISTOR-RESISTOR	1	
		RX51009	D1H83324A042	RESISTOR-RESISTOR	1	
		RX51305	D1H85604A042	RESISTOR-RESISTOR	1	
		RX51306	D1H85604A042	RESISTOR-RESISTOR	1	
		RX51307	D1H85604A042	RESISTOR-RESISTOR	1	
		RX51308	D1H85604A042	RESISTOR-RESISTOR	1	
		RX51309	D1H83334A042	RESISTOR-RESISTOR	1	
		RX51310	D1H86824A042	RESISTOR-RESISTOR	1	
		RX51311	D1H82224A042	RESISTOR-RESISTOR	1	
		RX51312	D1H84724A042	RESISTOR-RESISTOR	1	
		RX51313	D1H85604A042	RESISTOR-RESISTOR	1	
		RX51314	D1H84704A042	RESISTOR-RESISTOR	1	
		RX51315	D1H85604A042	RESISTOR-RESISTOR	1	
		RX51316	D1H84704A042	RESISTOR-RESISTOR	1	
		RX51317	D1H86824A042	RESISTOR-RESISTOR	1	
		RX51322	D1H86824A042	RESISTOR-RESISTOR	1	
		RX55001	D1H82224A042	RESISTOR-RESISTOR	1	
		RX55002	D1H81014A042	RESISTOR-RESISTOR	1	
		RX56101	D1H85604A042	RESISTOR-RESISTOR	1	
		RX56102	D1H85604A042	RESISTOR-RESISTOR	1	
		RX56103	D1H83334A042	RESISTOR-RESISTOR	1	
		RX56104	D1H83334A042	RESISTOR-RESISTOR	1	
		RX56105	D1H82204A042	RESISTOR-RESISTOR	1	
		RX56106	D1H81014A042	RESISTOR-RESISTOR	1	
		RX59001	D1H81014A042	RESISTOR-RESISTOR	1	
		RX59002	D1H83304A042	RESISTOR-RESISTOR	1	
		RX59003	D1H81014A042	RESISTOR-RESISTOR	1	
		RX59005	D1H83304A042	RESISTOR-RESISTOR	1	
		RX59501	D1H84734A042	RESISTOR-RESISTOR	1	
		RX59502	D1H81014A042	RESISTOR-RESISTOR	1	
		RX59503	D1H81034A042	RESISTOR-RESISTOR	1	
		RX59504	D1H81014A042	RESISTOR-RESISTOR	1	
		RX59506	D1H84734A042	RESISTOR-RESISTOR	1	
		RX59508	D1H81014A042	RESISTOR-RESISTOR	1	
		RX59510	D1H84734A042	RESISTOR-RESISTOR	1	
		RX8201	D1H83304A042	RESISTOR-RESISTOR	1	
		RX8202	D1H84724A042	RESISTOR-RESISTOR	1	
		RX8203	D1H83304A042	RESISTOR-RESISTOR	1	
		RX8204	D1H81014A042	RESISTOR-RESISTOR	1	
		RX8205	D1H84724A042	RESISTOR-RESISTOR	1	
		RX8206	D1H85604A042	RESISTOR-RESISTOR	1	
		RX8207	D1H84724A042	RESISTOR-RESISTOR	1	
		RX8208	D1H81014A042	RESISTOR-RESISTOR	1	
		RX8209	D1H85604A042	RESISTOR-RESISTOR	1	
		T59303	J0ZZB0000182	TRANSFORMER	1	
		X51201	H0J250500128	OSCILLATOR	1	
		X59501	H0J100500044	OSCILLATOR	1	
		X59502	H0J327200230	OSCILLATOR	1	
		X8201	H0J270500177	OSCILLATOR	1	

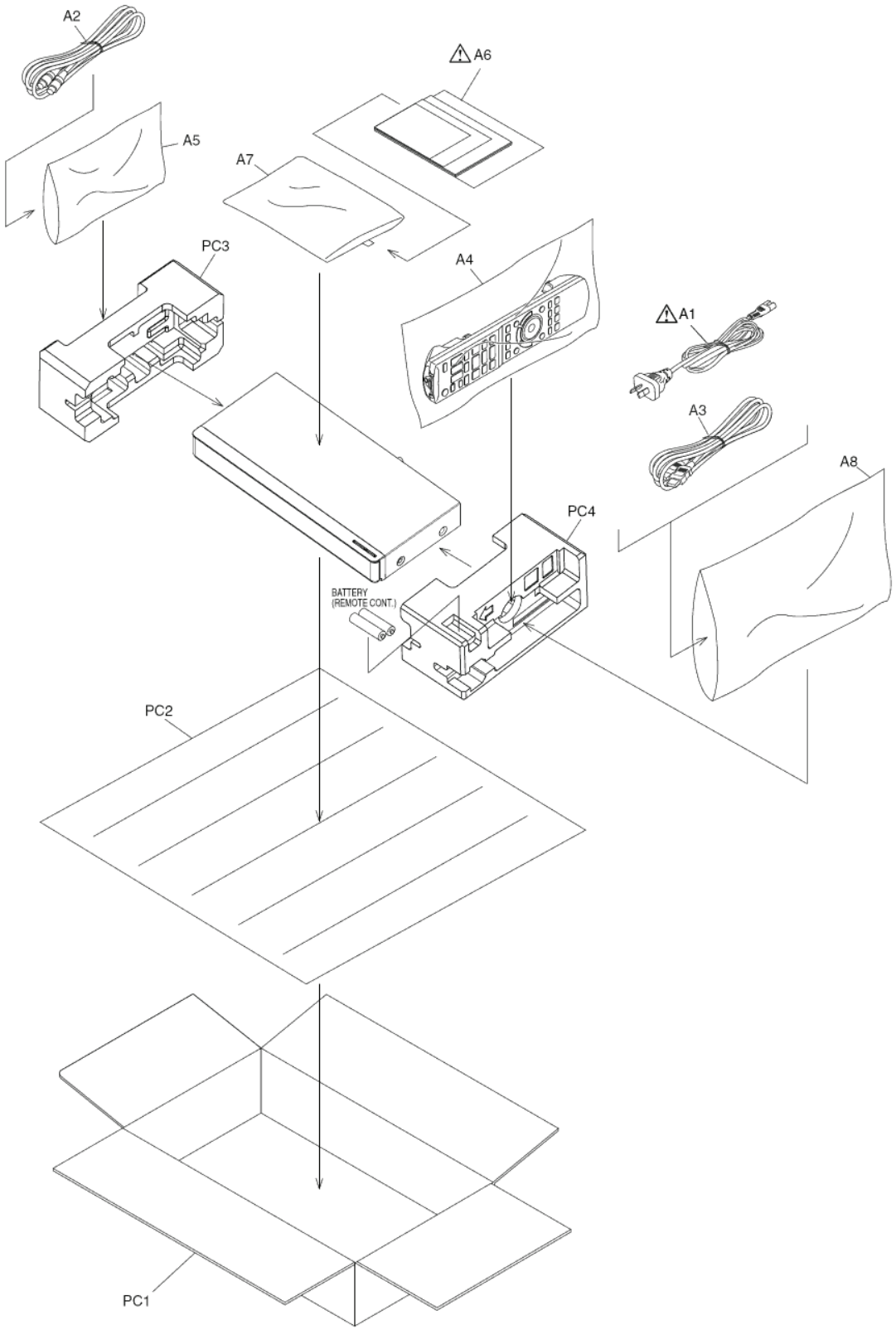
Model No. : DMR-PWT550GL/GZ Exploded View



Model No. : DMR-PWT550GL/GZ Mechanism View



Model No. : DMR-PWT550GL/GZ Packing View



Model No. : DMR-PWT550GL/GZ Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
			■	CASING		
	⚠	1	SXY0018	BD DRIVE	1	
		2	SUCV0035HDKT	HDD	1	
	⚠	3	SUKB0439AB	MAIN P.C.B.	1	(RTL) E.S.D. PWT550GL
	⚠	3	SUKB0439AC	MAIN P.C.B.	1	(RTL) E.S.D. PWT550GZ
		4	SUKB0436AB	DIGITAL P.C.B.	1	E.S.D. PWT550GL
		4	SUKB0436AC	DIGITAL P.C.B.	1	E.S.D. PWT550GZ
		6	VEP77183A	TUNER P.C.B.	1	E.S.D.
		7	SEP0437AA	SATA P.C.B.	1	(RTL) E.S.D.
		8	SEP0440AA	FRONT SW P.C.B.	1	(RTL) E.S.D.
		9	C5ZZZ0000088	Wi-Fi MODULE	1	
		10	L6FAYYYG0007	DC FAN MOTOR	1	
	⚠	11	RGR0458J-A1	REAR PANEL	1	PWT550GL
	⚠	11	RGR0458J-B1	REAR PANEL	1	PWT550GZ
		12	RMA2518-1	WIFI SUPPORT	1	
		13	RMX0486	DRIVE SPACER	1	
		14	RMX0486	DRIVE SPACER	1	
		15	RMX0519	DRIVE SPACER	1	
		16	RMX0519	DRIVE SPACER	1	
	⚠	17	RMZ1499	INSULATION SHEET	1	
		18	RSC0905	RADIATOR SHEET	1	
		23	RKA0239-KJ	FOOT RUBBER	1	
		24	RKA0239-KJ	FOOT RUBBER	1	
		25	RKA0239-KJ	FOOT RUBBER	1	
		26	RKA0239-KJ	FOOT RUBBER	1	
		27	RMA2482-3	HDD ANGLE	1	
		28	RYP2076A-K	FRONT PANEL ASS'Y	1	
		28-1	RMB0943	SPRING	1	
		28-2	RYF1007A-Q	DOOR ASS'Y	1	
		28-2-1	RMG0849-K	DOOR DAMPER	1	
		28-2-2	RMG0849-K	DOOR DAMPER	1	
		28-2-3	RMG0849-K	DOOR DAMPER	1	
		28-2-4	RMG0849-K	DOOR DAMPER	1	
		29	RGU2958-K	POWER BUTTON	1	
		30	RGU2959-K	OPEN/CLOSE BUTTON	1	
	⚠	32	RKM0624-K	TOP CASE ASS'Y	1	
		33	SEE0159	WLAN CABLE	1	
		34	STJ0047	BD POWER FFC	1	
		101	RHD30111-31	SCREW	1	
		102	RHD30111-31	SCREW	1	
		103	RHD30111-31	SCREW	1	
		104	RHD30111-31	SCREW	1	
		105	RHD30111-31	SCREW	1	
		106	RHD30111-31	SCREW	1	
		107	RHD30111-31	SCREW	1	
		108	RHD30111-31	SCREW	1	
		109	RHD30111-31	SCREW	1	
		110	RHD30111-31	SCREW	1	
		116	RHD30119-L	SCREW	1	
		117	RHD30119-L	SCREW	1	
		119	RHD30119-L	SCREW	1	
		120	RHD30119-L	SCREW	1	
		121	RHD30119-L	SCREW	1	
		122	RHD30119-L	SCREW	1	
		123	RHD30119-L	SCREW	1	
		124	RHD30119-L	SCREW	1	
		125	RHD30183	SCREW	1	
		126	RHD30183	SCREW	1	
		127	RHD30183	SCREW	1	
		128	RHD30183	SCREW	1	
		129	XYN3+C4FJ	SCREW	1	
		130	XYN3+C4FJ	SCREW	1	

Model No. : DMR-PWT550GL/GZ Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		131	XYN3+C4FJ	SCREW	1	
		133	XSN3+4FJ	SCREW	1	
		134	XSN3+4FJ	SCREW	1	
		135	RHD26045-J	SCREW	1	
		136	RHD26045-J	SCREW	1	
		137	RHD26045-J	SCREW	1	
		138	RHD30113-1K	SCREW	1	
		139	RHD30113-1K	SCREW	1	
	⚠	201	VQL2Q40	LASER CAUTION LABEL	1	
		202	VMD6581-6	UPPER BASE	1	
		203	VMT2257	DUST SHEET	1	
		204	VMA0Y49	YOKE	1	
		205	VMD6582-2	CLAMPER	1	
		206	VMG2026	CLAMP COVER	1	
		207	VMD6583-1	TRAY	1	
		208	VMA0Y47	HEAT SINK	1	
		209	VMD6587-5	MID BASE	1	
		210	VMG1694	HEAT SINK RUBBER	1	
		211	VMT2258	DUST CUSHION A	1	
		213	VMZ3930	DUST SHEET A	1	
		214	VMZ3930	DUST SHEET A	1	
		216	VWJ2477	OPU FFC	1	
		217	K0L1CE000001	SWITCH	1	
		218	VDG1774	PULLEY GEAR	1	
		219	VDG1775	MID GEAR	1	
		220	VDG1776	DRIVE GEAR	1	
		221	VEM0897	LOADING MOTOR U	1	
		222	VMD6951-2	MECHA CHASSIS	1	
		223	VMD6585-2	SLIDE CAM	1	
		224	VMG1720	BELT	1	
		225	VWJ2317	SWITCH FFC	1	
		226	VMG2027	DAMPER	1	
		227	VMG2027	DAMPER	1	
		228	VMG2027	DAMPER	1	
		229	VMG2027	DAMPER	1	
		230	XTV26+10GFJ	SCREW	1	
		231	XTV26+10GFJ	SCREW	1	
		232	XTV26+10GFJ	SCREW	1	
		233	XTV26+10GFJ	SCREW	1	
			■	ACCESSORY		
	⚠	A1	K2CJ2YY00101	AC CORD	1	
		A2	K1TYYYY00056	COAXIAL CABLE	1	
		A3	K1HY19YY0011	HDMI CABLE	1	
		A4	N2QAYB001041	REMOTE CONTROL ASS'Y	1	PWT550GL
		A4	N2QAYB001043	REMOTE CONTROL ASS'Y	1	PWT550GZ
		A5	RPFC0119-1	POLYETHYLENE BAG	1	
	⚠	A6	SQT0815-1	OPERATING INSTRUCTIONS	1	
		A7	RPF0703	POLYETHYLENE BAG	1	
		A8	RPF0703	POLYETHYLENE BAG	1	
			■	PACKING		
		PC1	SPU0066	PACKING CASE	1	PWT550GL
		PC1	SPU0067	PACKING CASE	1	PWT550GZ
		PC2	RPF0739	POLYETHYLENE BAG	1	
		PC3	SPN0233A	CUSHION(A)	1	
		PC4	SPN0233B	CUSHION(B)	1	